

ARCHITECTURE

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Sources of Inspiration

By Ely Jacques Kahn

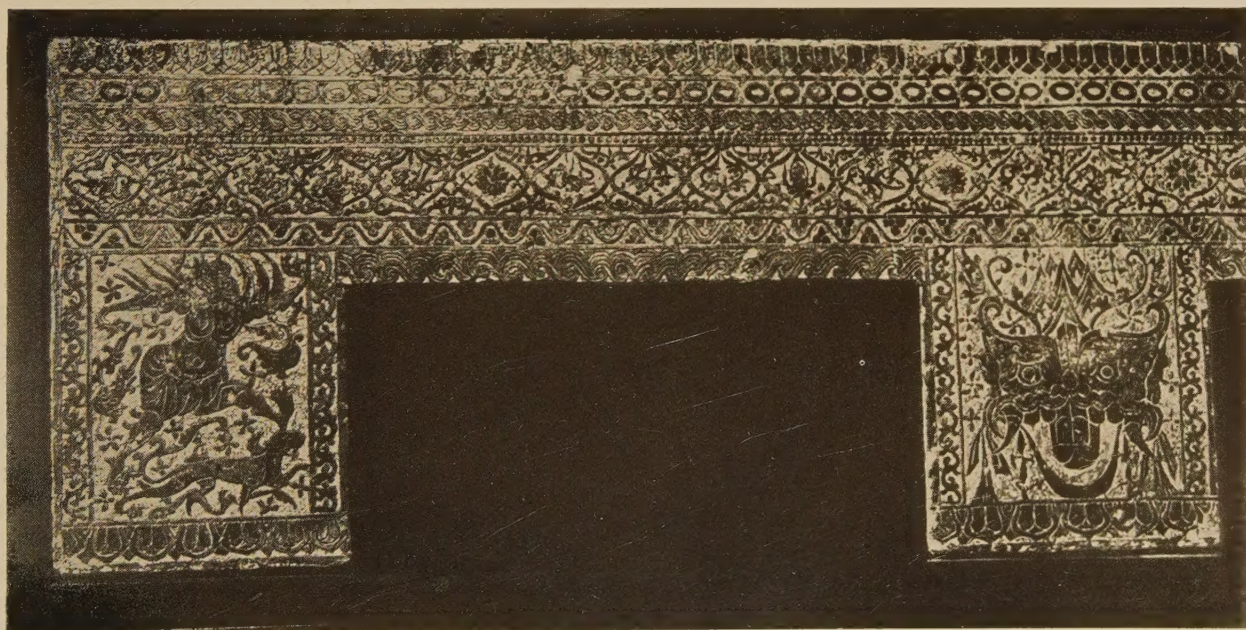
To him who, nauseated by the egg-and-dart, forswears all dependence upon the forms of the past, the author ventures to suggest that there are wells, unknown apparently to most of us, from which may be drawn inspiration sufficient to stimulate any designer to go forward, adapting and developing rather than copying, to new creations of beauty.—EDITOR.

❖❖❖ **I**T is quite apparent in the present mood of architectural design that copying of traditional ornament, so long a most respectable procedure, is no longer acceptable. The thumbled catalogues, the well-known plates of the standard books, become a little more dusty as they enjoy well-deserved vacations on the architect's shelves. It is possibly a little early to assume that all designers will, or possibly can, completely emancipate themselves from conditions that are commonplace, but there is ample evidence that downright forging of



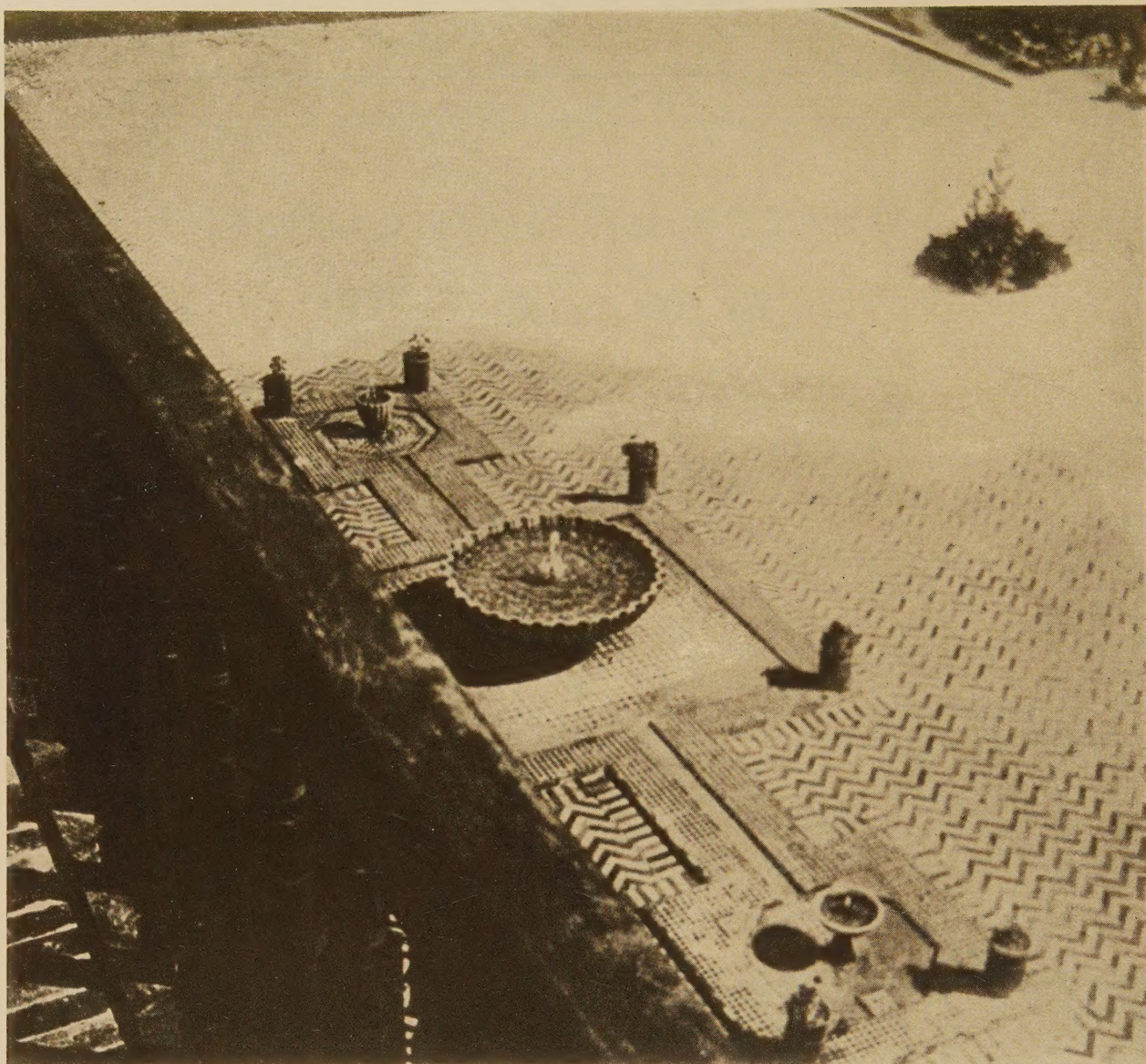
other men's conceptions will presently be considered as unworthy. It is unnecessary to suggest that the very men of the Renaissance in Italy who rediscovered Rome and inspired themselves from the few fragments that were available could not have been sufficiently supine to be satisfied with purely imitative effort.

The new attitude in design proceeds to consider decoration from a new angle. Decoration is not necessarily ornament. The interest of an object has primarily to do with its shape, proportion, color. The texture of its surface, the



From "Les Arts de l'Asie": "Les Animaux dans l'Art Chinois"

Architectural detail in stone, Chinese, Han Epoch



From "Le Jardin Maison Arabes au Maroc," vol. II

A palace courtyard in Morocco

rhythm of the elements that may break that surface either into planes or distinct areas of contrasting interest, becomes ornament.



The resistance to classic detail is a normal revulsion to a mode of education common to our generation. There was a great deal of emphasis on draftsmanship, knowledge of certain stock forms, and extremely little effort to force the students to respect the dignity of the decorative shapes which they were encouraged to lavish on their designs. It is normal to admire clever-

ness, whether it be the brilliancy of strange ritualistic designs of a South Sea savage or highly intellectual ornament of a Raphael. In each case the artist was honest to his particular job—unconscious of anything but making his work as fine as his powers permitted.

In the modernistic creed it is assumed that simplicity, which is fundamental to any great work of art, is synonymous with the primitive. The painters have, for some time, revelled in bad painting in which certain excellent qualities of the naïve have had to drag along absurdities of composition and drawing hardly recompensed by the fresh color of the new schools. Eventually, the exaggerated interest in archaic forms—

the African negro sculpture, Indian pottery, the paintings of the Esquimos—will prove to be merely a realization of natural artistic qualities. The contemporary philosophy springs to complete simplicity with the work of the extremists, such as Corbusier, Mallet-Stevens, Lurçat, Perret, in France; Taut, Gropius, in Germany. These architects demand purity in mass, as well as detail. Their work must naturally be considered in relation to their particular problems—the sites, the people who use their buildings. That they would with difficulty fit our own conditions, or satisfy our public's tastes, is beside the point; they are most interesting examples of the work of men assisting a movement to develop. It is equally unimportant that the concrete they so often use does not retain for any reasonable period the crispness or sharpness of the original design. Stone, marble or brick develops patine which covers many an indifferent structure with a lovely skin of time-worn tone. If concrete, because of its porous quality, is not the proper material for the new building, the

ingenuity of the new school will produce a better substance.



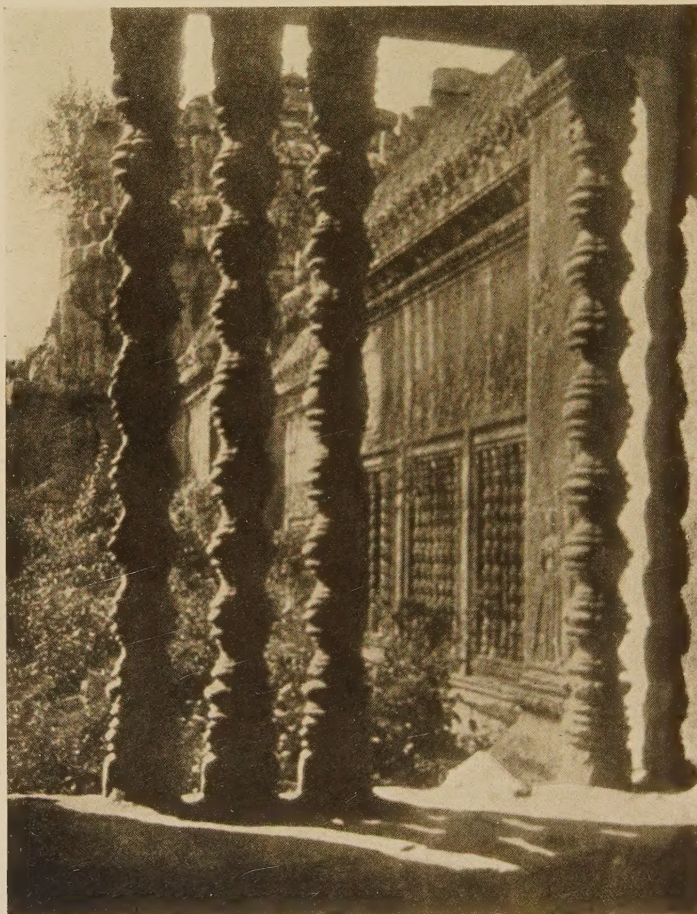
In this very use of concrete, Frank Lloyd Wright realized, many years ago, that the pattern of a surface would help in a large measure to offset this difficulty. He evolved textured walls in concrete block, brick, stucco, that through a repetition of simple design presented a thoroughly interesting surface. As time weathers the material, the walls are increasingly pleasing. In consideration of the forms themselves it will be interesting to analyze, briefly, the work of Louis Sullivan, one of the Americans whose influence spread throughout Europe but whose works unfortunately are being submerged in a wave of rebuilding that has small respect for purely æsthetic values. Sullivan can be considered as a direct descendant of the



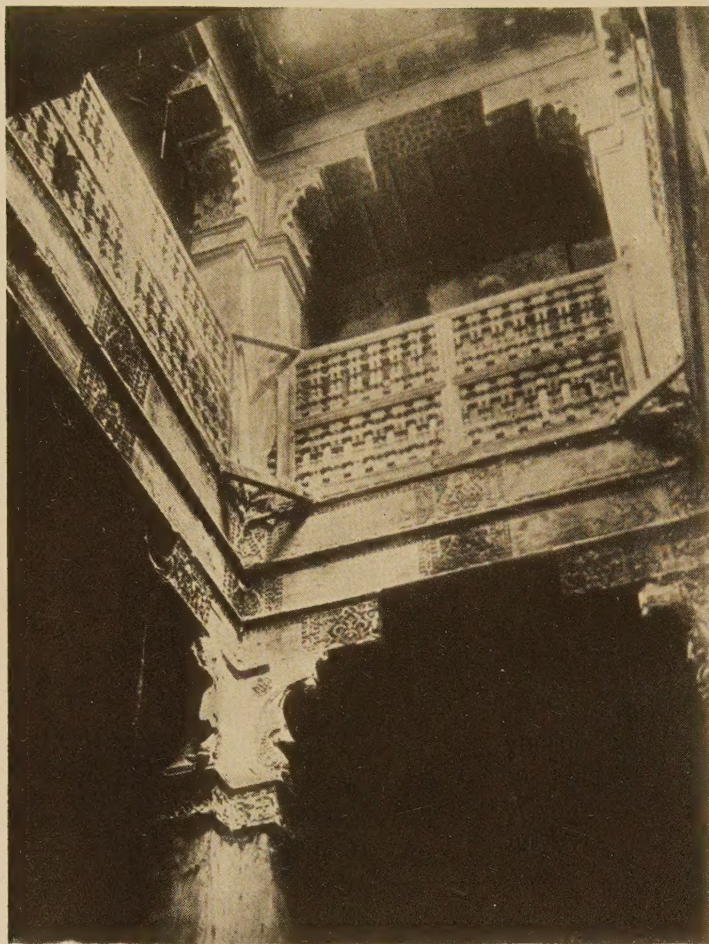
From "La Peinture des Vases Grecs"

Greek amphora from Nicosthènes,
sixth century

Detail of a twelfth-century façade, India



From "Indische Plastik"



From "Le Jardin Maison Arabes au Maroc," vol. I

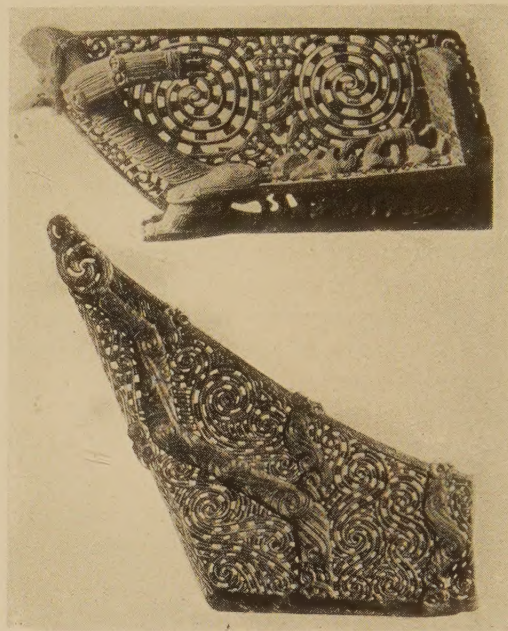
Romanesque tradition of Richardson and his school. His facile pencil, quite apart from his vigorous talents as an architect, produced ornament that in its exuberance, and in an era of wretchedly unimaginative effort, was astounding. At his death, his influence stopped, largely because of the purely personal quality of his work and more particularly because the involved detail he produced became somewhat tiresome. His architecture stands quite independent of his ornament. One is more interested, however, in looking beyond the idiosyncrasies of the individual, and, needless to say, both Wright and Sullivan have established their fame as masters of surface and texture.

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The influence of Wright likewise had much to do with the decorative detail that, developing in Holland, brought forth a rich flowering in Holland and as well in Germany. The Dutch designs emphasize particularly the quality of

Court of an Arabian house in Morocco

Prows of Maori canoes, New Zealand



From "Die Kunst der Naturvölker und der Vorzeit"

Rhodian Greek wine jug, sixth century



From "La Peinture des Vases Grecs"

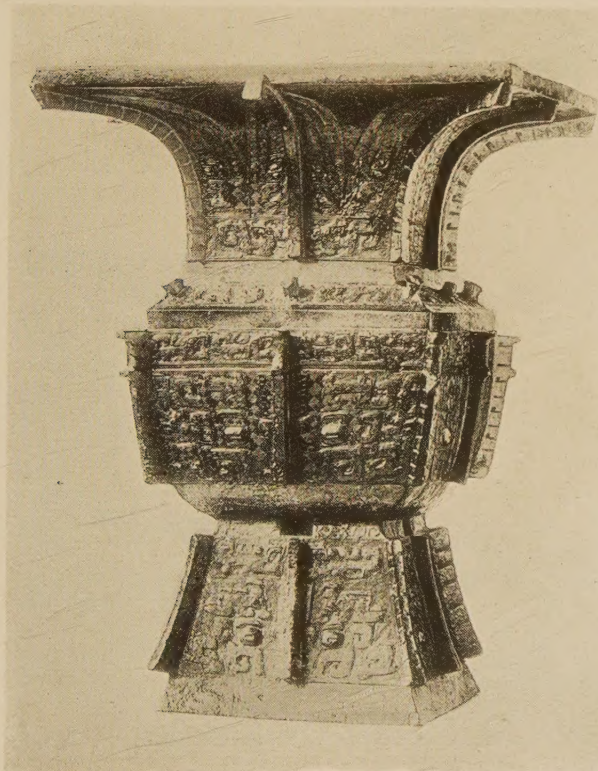
*Carved wooden doors
from Rajputana*

*Bronze pedestal from Benin,
British Nigeria*

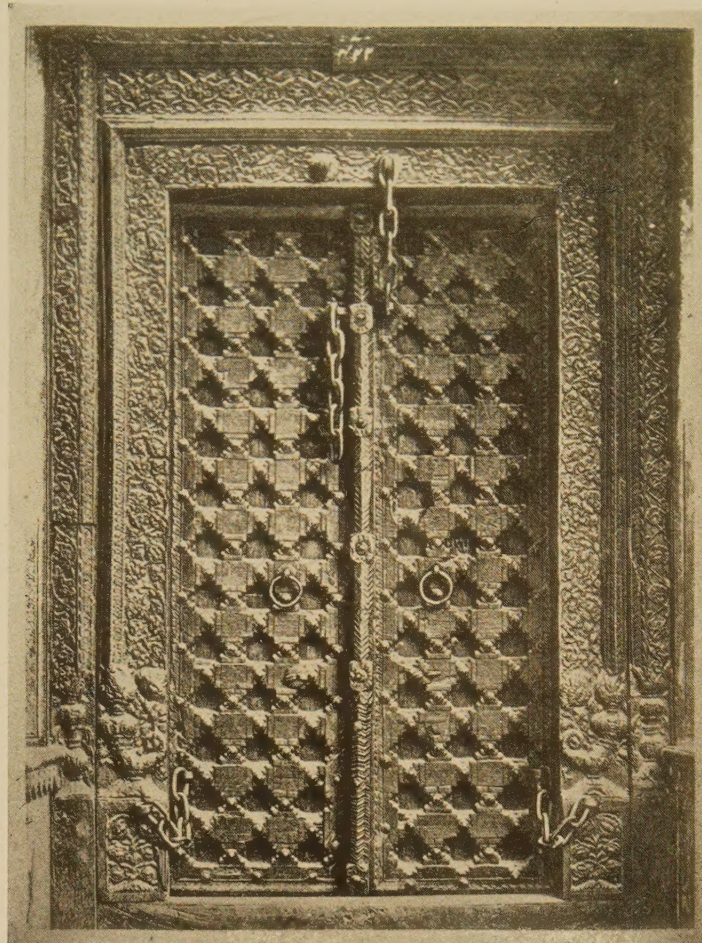


From "Die Kunst der Naturvölker und der Vorzeit"

*Ritual wine vase, a
Chinese bronze*



From "Les Arts de l'Asie": "Le Bronze Chinois Antique"



From "Indische Paläste und Wohnhäuser"

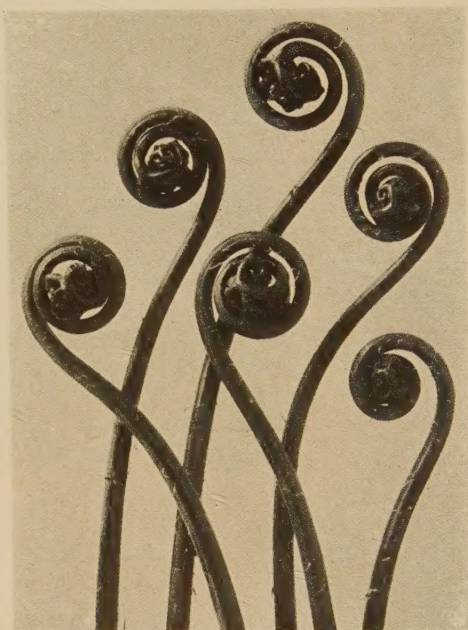
texture that their brick architecture so readily adapts. Apart from the pressure of actual economy, the new detail comfortably fits into the Dutch landscape as compared to the curious Baroque recollections of Renaissance extraction. Hilvershulm, near Amsterdam, and in particular the work of Dudok, merits the most serious consideration. Here is picturesqueness, astounding as it may seem, produced with the most bald directness of brick surface. Ornament becomes entirely a matter of relationship of solid and void—window openings, roof projection, band courses; the slightest projection becomes important in view of the rigorous avoidance of elaboration. The buildings were not studied in the flat—that is self evident—for the fascination of such a structure as the school in Hilvershulm becomes apparent when one has walked several times about the buildings and realizes that the subtlety of its design is due in part to its purity and partly to an absence of anything extraneous. Like it or not, cavil at the whimsy of the designer, but respect the force and intelligence that produces work of such calibre.



From "Les Arts de l'Asie": "Les Animaux dans l'Art Chinois"

*Fish with human head, a
Chinese red terra-cotta*

*The young fronds
of American
Maidenhair Fern*



From "Art Forms in Nature"



From "Die Kunst der Naturvölker und der Vorzeit"

*Wooden club from the Marquesa
Islands*



From "Kleinplastik der Aegypter"

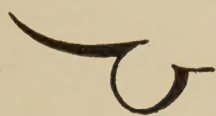
*Minor sculpture from
Egypt*

*Bas-relief in stone,
fifth century*



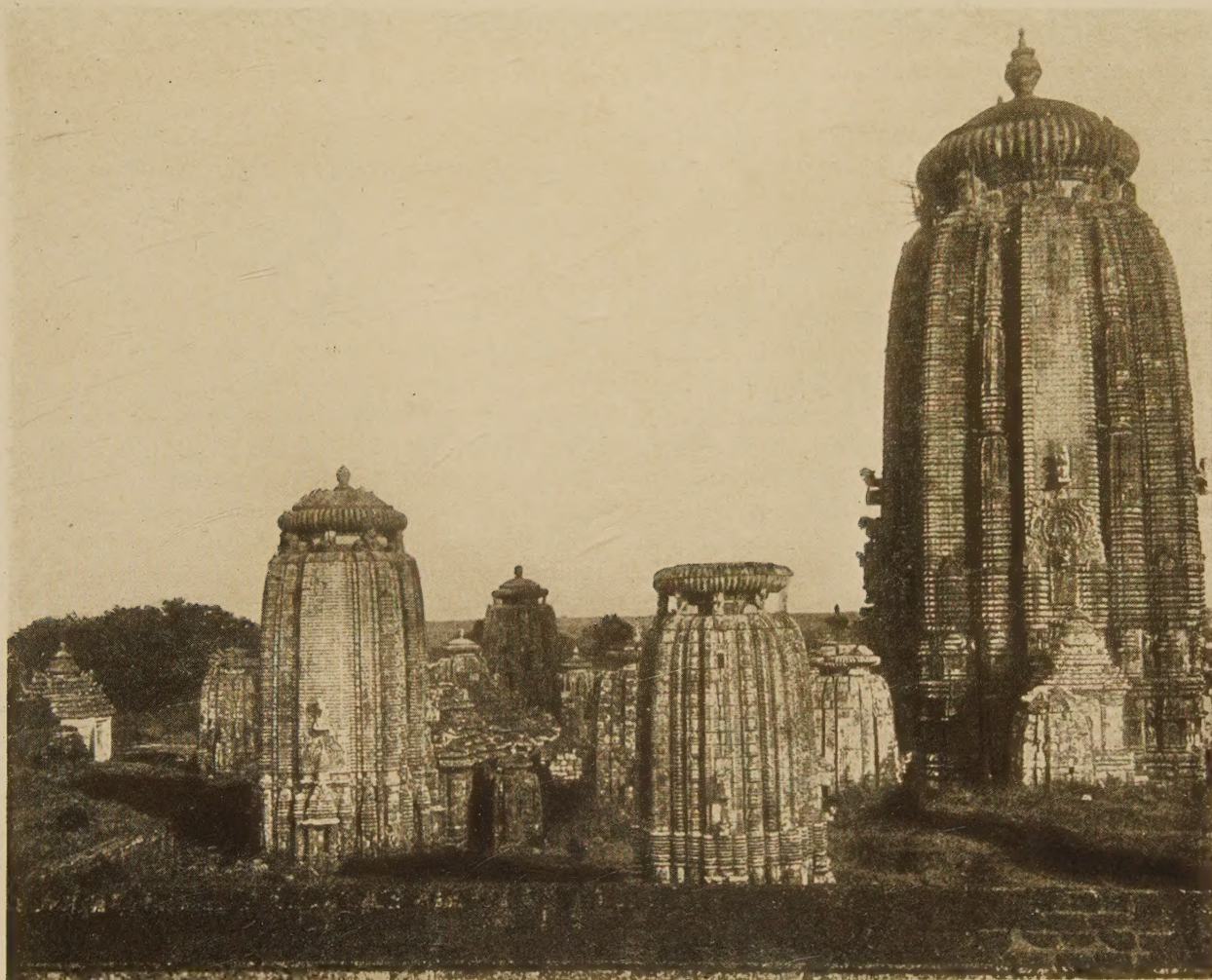
From "L'Art de l'Asie Occidentale Ancienne"

The difficulty of the purist is that a certain hardness and cold quality is likely to develop because of this conscious restraint. Where exuberance of the Baroque design permitted the greatest excesses, and where brilliancy of composition excused the most wretched ornament, the new mode is critical and jealous of every minor element. This possibly is the crux of the situation. The spotlight of attention is concentrated—every detail, moulding, must explain itself. When mural painting degenerates into mere acres of wall covering and sculpture to a row of effigies, the same concentrated criticism becomes obvious.



It has been claimed that in the new philosophy, painting, sculpture, and inspiration from

all natural forms are taboo. Decoration will become altogether abstract and the artists who formerly were vital factors in the conception of the building will be ignored. What is more certain is that the same spotlight will show many of these artists to be merely reasonably trained plagiarists. Most of the painters stop short on learning how to paint the human figure and the conventional accessories. Few have discovered that decoration in its real sense deals with the relationship of tones, of varying materials. Fewer still have realized that what the modern building demands is the artist who knows the range of materials—glass, metals, woods, fabrics, leather, stones, marbles, so that his palette is something beyond mere pigment to be applied to canvas. Drawing, the application of particular detail, whether it be that of the human figure or other natural form, will merely become characteristic of the individual.



From "Indische Plastik"

A temple group at Bhubanesvara, India, thirteenth century

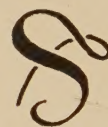


From "Les Arts de l'Asie": "Les Animaux dans l'Art Chinois"

Panel in brick terra-cotta, height 10 cm., Chinese, Han Epoch

Following these somewhat radical statements, one still demands whether baldness is an ideal. If the simplicity of the moderns is so admirable, if the painters and sculptors are hopelessly out of sympathy with the movement, will the future accept absence of so-called decoration with equanimity? The answer lies precisely in the instinct of each race, each group of men, to produce work that will thoroughly represent their time and associations. More or less decoration—abstract or natural forms, color or monochrome—is an evidence of individual taste. There are sources rich beyond the dreams of the student, where modernists of every period, back to the most dim recollections of artistic effort, produced fresh, vigorous work honestly and fitly representative of their jobs. The earliest Chinese sculpture presents masterpieces produced by men who knew little of the world about them. They used bronze, stone, clay, respecting their materials and enriching their cherished pieces with a whimsy and variety of pattern characterizing their own desires for enrichment—the necessary application of ritualistic symbols. So did Mayan architects evolve their ornaments. The Persian potters, in valleys, on hillside, distinct by reason of geographic separation, designed magnificent works up to the time that too easy intercourse of people—military conquests in particular—hurled them into a mongrel group of politically and socially decadent rabble. It is,

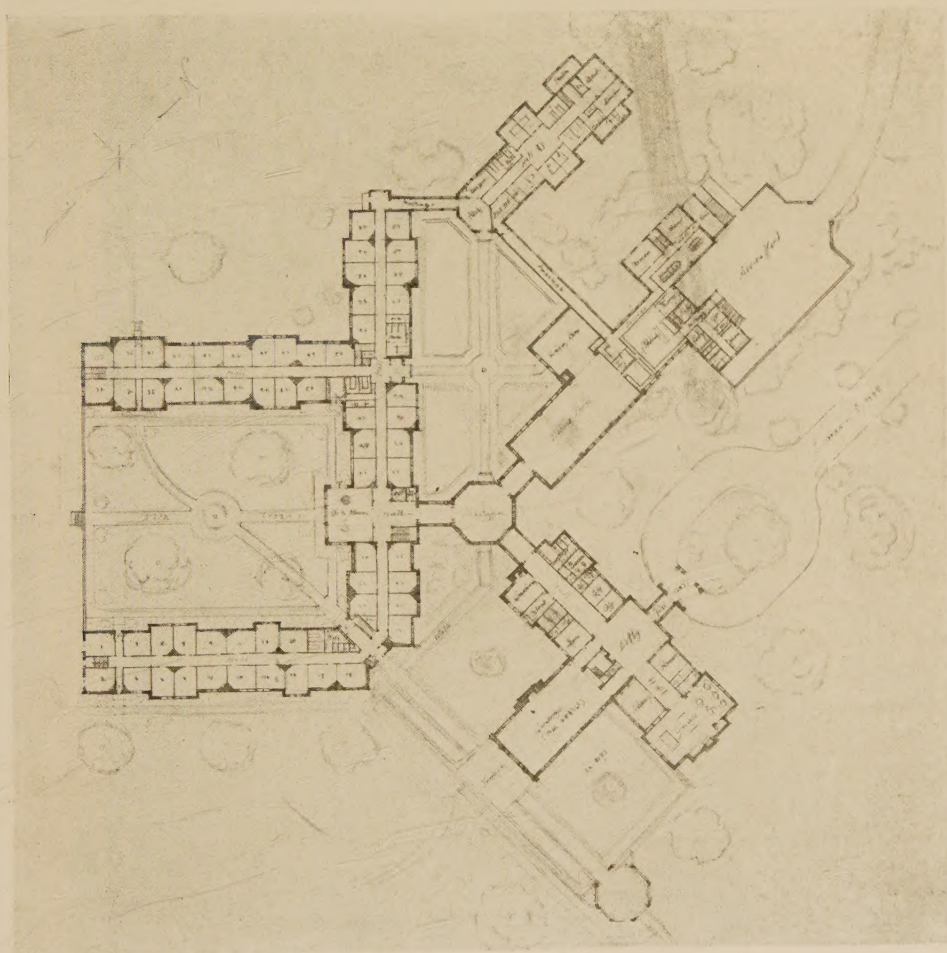
unfortunately, this turmoil and furious shuffling of peoples that has disintegrated one vigorous intellectual group after another. New nations as they arose aped the most powerful, the most blatant, and our own contemporary situation varies little from other historic episodes.



Our particular period, however, insists on one new contribution. Science has made it possible to review, with considerable accuracy, the intellectual development of the past. The machine, facile transportation, an immense reservoir of materials of every conceivable type, lie before the designer. The scientist stands ready to produce new materials, obtain new results in finish, construction—anything is possible to the architect. He can ignore the classic principle of the arch and its thrust, for he employs steel, reinforced concrete. If he chooses to build his walls of glass, of metal—anything—there is no longer an accepted formula. He has electricity at his command. He can heat or chill, produce any variety of illumination; play with sound if he chooses, and what is not available to-day will be there to-morrow. What he cannot do is to ignore his epoch and be a complacent copyist, for there is death and ignominy.



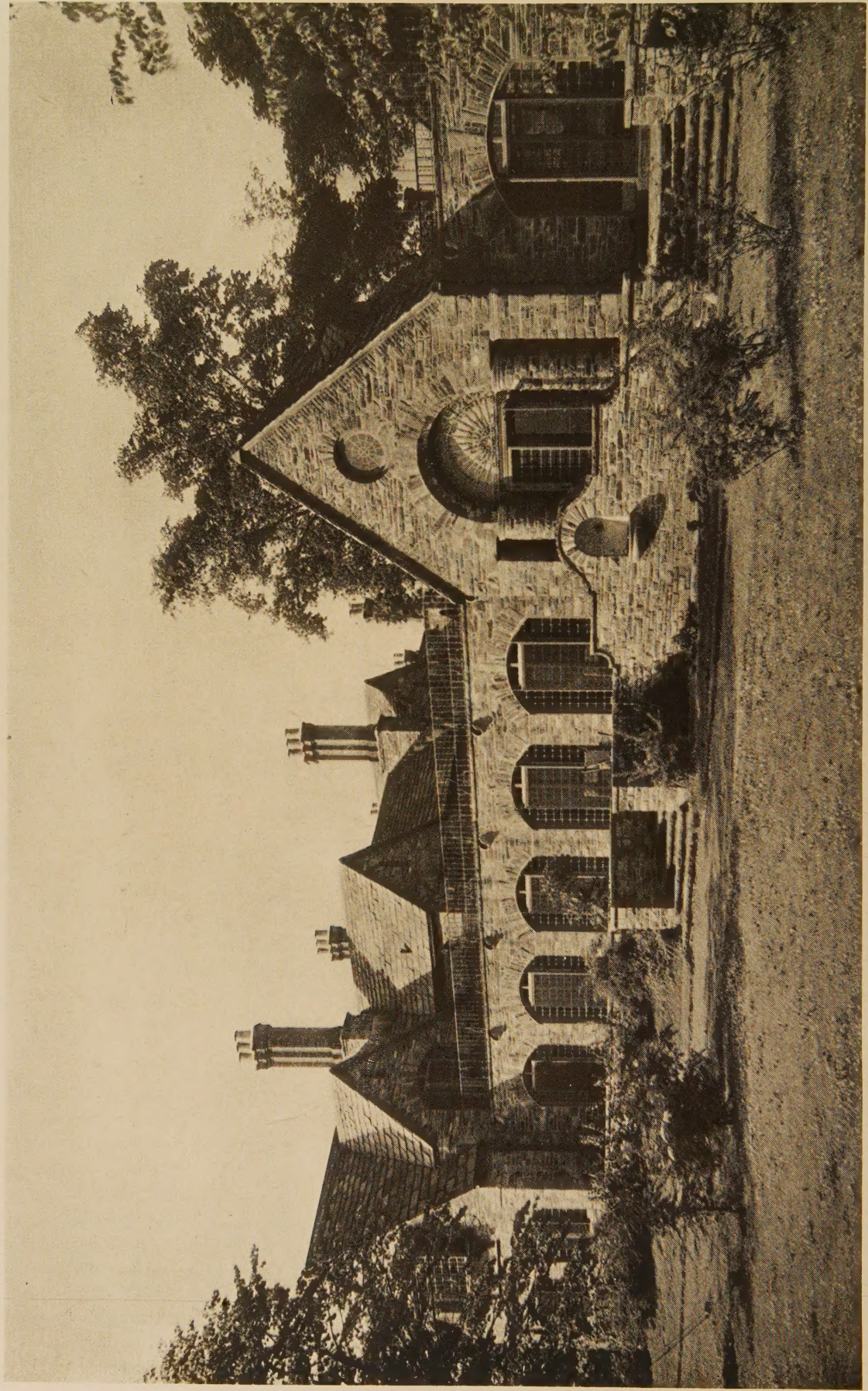
Photographs by S. H. Gottscho



Marcus L. Ward was a wealthy bachelor who lived beyond his friends. Impressed with the plight of men in like circumstances but without means, he left \$5,000,000 for a "home for aged and respectable bachelors and widowers."

MARCUS WARD
HOME,
MAPLEWOOD, N. J.

OFFICE OF JOHN
RUSSELL POPE,
ARCHITECT;
ALEXANDER B.
TROWBRIDGE,
CONSULTING
ARCHITECT;
OLMSTED BROTHERS,
LANDSCAPE
ARCHITECTS



Detail of steps and entrance in quadrangle

MARCUS WARD HOME, MAPLEWOOD, N. J.

OFFICE OF JOHN RUSSELL POPE, ARCHITECT; ALEXANDER B. TROWBRIDGE, CONSULTING ARCHITECT



Billiard-room fireplace

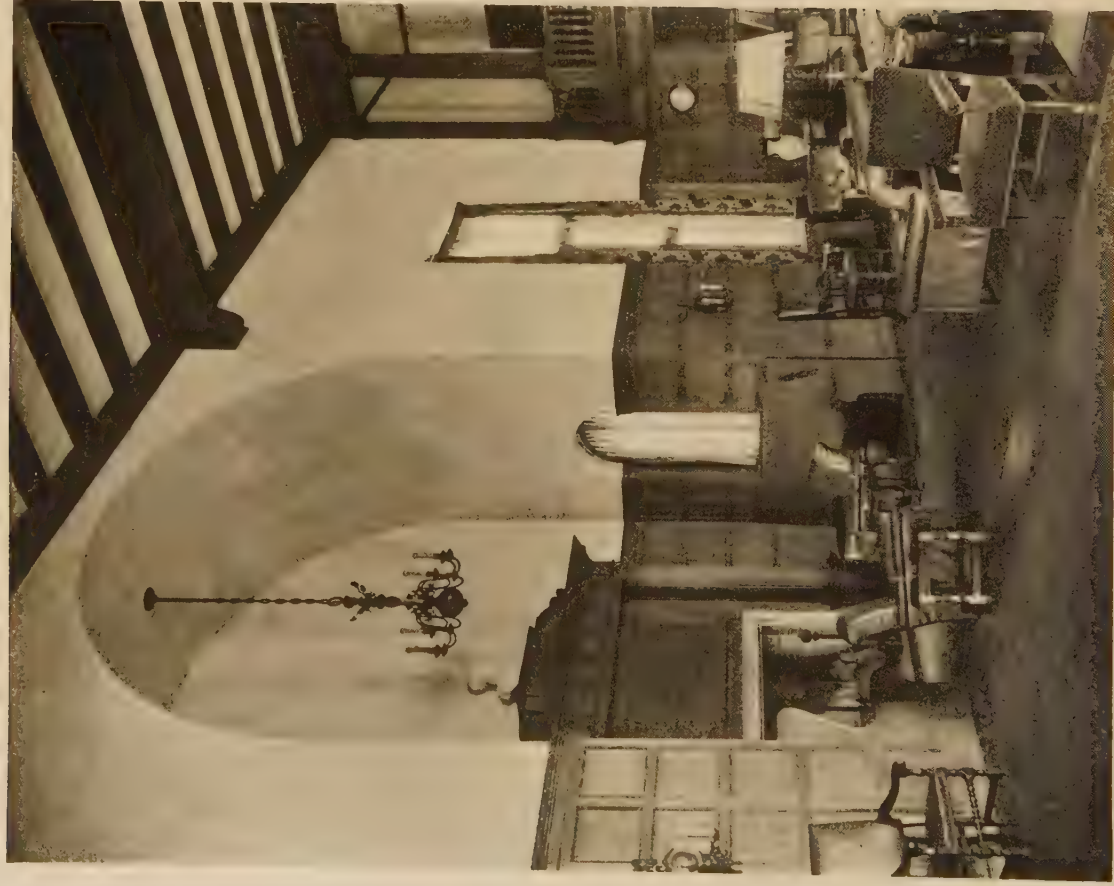
ESSEX STUDIO, DECORATORS

Porch fireplace



MARCUS WARD HOME, MAPLEWOOD, N. J.

OFFICE OF JOHN RUSSELL POPE, ARCHITECT; ALEXANDER B. TROWBRIDGE, CONSULTING ARCHITECT

*Living-room*

MARCUS WARD HOME, MAPLEWOOD, N. J.

OFFICE OF JOHN RUSSELL POPE, ARCHITECT; ALEXANDER B. TROWBRIDGE, CONSULTING ARCHITECT. ESSEX STUDIO, DECORATORS



The Architectural Clinic

ON OFFICE SHORT-CUTS BY PHOTOGRAPHIC AIDS



I. FOR WORKING DRAWINGS

ONCE to every job and architect comes the moment to decide whether carefully drawn scale details will or will not suffice instead of "full-sizes." When 3-inch scale drawings have been painstakingly worked out for ornament which is to be modelled, or wrought iron which is to be executed and interpreted by a first-class craftsman, there is no need for laboriously drawing out full-size details. But usually stone and terra-cotta details require tedious enlargement of curves and intersections to actual size, ceiling patterns and floor mosaics consume a day's labor, while profiles of sections often lose their character in being full-sized by some other than their author.

An inexpensive solution to these and related problems lies in the employment of "photostat" and "solar" prints. These are cheap photographic processes which make use of paper instead of glass negatives (white lines on brown background), and produce reproductions with lines almost black on paper almost white. For many years insurance companies have used photostats in copying contracts, retaining the original themselves and returning a photostatic copy to the insured. Reproduction is quite accurate in the centre of the sheet, but, as is true with all photographs, there is liable to be distortion in the corners if the enlargement is too great. The extreme size for photostats is generally about 20 by 24 inches, at the cost of about one dollar, although newer machines make larger ones. Solar prints can be made about 6 feet in length, which is as long as many of the best architects make their details on any one sheet. To use solars of this size is expecting a little too much for accurate enlargement, however, and it is better practice to have two 3-foot drawings made and pasted together.

It may sometimes happen that absolute accuracy within a sixteenth of an inch must be maintained for a template, and the photostat or solar print itself cannot be sent off for working-drawing purposes as it comes from the printing machine. In such cases it often suffices to affix

dimension lines and notes with a colored crayon on the print itself, or, at the very worst, to make a tracing with the faulty portions corrected. Even in the latter case there is invariably a saving of drafting costs, because the expense of the print plus the time in tracing cannot equal the cost of time in laying out and completing a complicated full-size from a scale drawing.

In most large offices specialization is carried out to such a degree that only infrequently does the original designer execute the full-sizes of a job, much as he would like to. Every architect laments not being able to have the designer carry to completion the work he envisioned from its early state, recognizing that unity and beauty of execution cannot follow if five draftsmen of varying taste draw details through successive stages of development. The use of photostat prints would help in large measure to approach the ideal condition, by permitting the original designer to maintain the character and feeling he originally had in mind, with but a small expenditure of his time. Scale details could be enlarged, studied over with charcoal, and, if extensive alterations were necessary, could be traced by a junior draftsman. Almost every office records errors which have occurred in full-size drawings because scale details were inaccurately interpreted by carelessness in scaling or measurements. Ornamental panels and sometimes entire design schemes have been changed because full-sizes seemingly showed revision to be necessary, only to find out later that a draftsman's error in stepping-up the scale caused needless alteration.

The time which full-size detailing consumes is the item which may be at least partly saved by photostatic enlargement. For construction details the photostat is practically valueless, for a 9-inch I-beam at 3-inch scale is not likely to be accurate when enlarged four times. On the other hand, ornamental features are served admirably by a photostat, for

only an unusual draftsman can enlarge a panel of acanthus or *putti* and maintain the same feeling and relation of parts as had the original small-sized study.





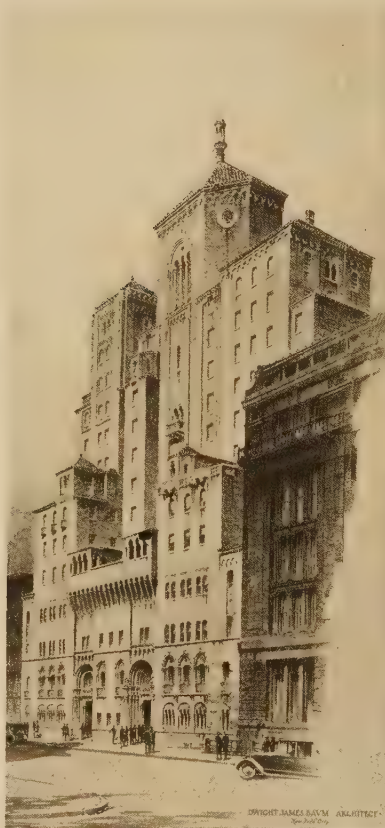
*The new League of Nations group from Lake Leman—on the left, the Secretariat and, on the right, the Assembly Hall flanked by the Council Chamber and the Rockefeller Library.
Nenot, Lefèvre, Flegenhimer, Broggi and Vago, architects*

Architectural News in Photographs



The new department-store building for Abraham & Straus, Brooklyn, the main piers in the lower part built of rounded brick. Starrett & Van Vleck, architects

The Westside Y. M. C. A., New York City, has a new house on 63d Street, accom-



The new Waldorf-Astoria as it will appear from the air—the largest hotel structure in the world. Schultze & Weaver, architects

modating over six thousand residents. Dwight James Baum, architect



The first Junior High School, so far as we know—in the Bronx, New York City—to employ so-called modern motives. Walter C. Martin, architect



Two New England churches which have been combined at Middlefield, Conn., utilizing both old buildings. Delbert K. Perry & Earle K. Bishop, architects



The proposed North Little Rock High School, North Little Rock, Ark. George R. Mann, Wanger & King, architects



A country home that is being built for Mr. E. F. Fisher, in the vicinity of Detroit. Richard H. Marr, architect

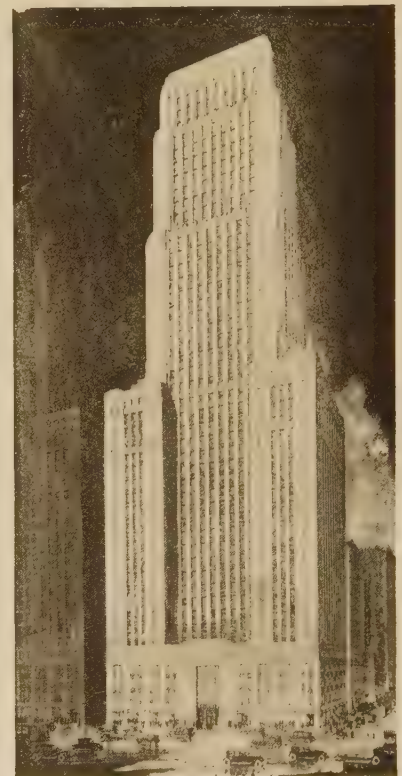


Chicago's rapidly heightening skyline as seen from the fountain in Grant Park



A Masonic Temple for Ft. Smith, Ark. George R. Mann, Wanger & King, architects; Harolson & Nelson, associate architects

Collegiate Church of St. Nicholas, Fifth Avenue, New York City, is having its face lifted, its brown stone having disintegrated



The proposed One La Salle Street Building, Chicago — forty-nine stories. K. M. Vitzthum & Co., architects

BOOK REVIEWS

SOUNDING STONES OF ARCHITECTURE.

By PHILIP N. YOUTZ, M.A., A. I. A. 256 pages, 5¼ by 7½ inches. New York: 1929: W. W. Norton & Company, Inc. \$2.50.

Mr. Youtz, who is an architect and a lecturer in philosophy at Columbia University, gives us a new vista of the kinship among the arts—drama, music, painting, poetry, and sculpture, with architecture. His interest through wide travel has been perhaps less with the appearance of architecture than with the many things that lie back of it—the social, intellectual, and art forces that created it. He reads architecture as a page of history, depicting human behavior, thought, aspiration, and makes the reading as full of interest as modern fiction.

LAWNS. By F. F. ROCKWELL. 87 pages, illustrated with photographs and diagrams, 5 by 7¼ inches. New York: 1929: The Macmillan Company. \$1.

A new volume in the series, *The Home Garden Handbooks*, all of which are designed to serve as a supplement to the catalogues of seedsmen and nurseries.

ANCIENT PAGAN SYMBOLS. By ELISABETH GOLDSMITH. 220 pages, with 48 illustrations, 4¼ by 6½ inches. New York: 1929: G. P. Putnam's Sons. \$3.

A companion volume to "Sacred Symbols in Art," designed for the convenience of travellers in Egypt and the Far East, and for students in the galleries and museums.

CALIFORNIAN ARCHITECTURE IN SANTA BARBARA. Collected and edited by H. PHILIP STAATS. Preface by CHARLES H. CHENEY, A. I. A. 125 pages, 8 by 11 inches. New York: 1929: Architectural Book Publishing Company, Inc. \$7.50.

As is well known in the profession, Santa Barbara seized its opportunity after the earthquakes there, and rebuilt a city that, so far as was possible, is consistent in its architecture. The example set at that time has been followed consistently by later work. As a result, there is much here to see, and most of it is good. The illustrations are from photographs and plans.

THE NEW INTERIOR DECORATION. By DOROTHY TODD and RAYMOND MORTIMER. 42 pages of text with 92 plates, 8¼ by 11 inches. Printed in Great Britain. New York: 1929: Charles Scribner's Sons. \$6.

A survey, largely pictorial, of contemporary decoration, with a rigid exclusion of all work in which traditional styles, even in modified forms, appear.

The authors have excluded also that which seems merely bizarre. Since the movement in contemporary decoration is progressing at such a high speed, this book can bring only a fairly comprehensive view of what is changing daily. There are some two hundred illustrations of work in Europe and America.

A HANDBOOK OF GREEK AND ROMAN ARCHITECTURE. By D. S. ROBERTSON, M.A., Fellow of Trinity College and Regius Professor of Greek in the University of Cambridge. 406 pages, with 24 plates, profusely illustrated from photographs and drawings, 6¼ by 9 inches. Printed in Great Britain. London: 1929: Cambridge University Press. New York: The Macmillan Company. \$10.

Professor Robertson has written a handbook, rather than a history, his purpose being to bring together the main facts in the history of Greek, Etruscan and Roman architecture from their earliest times to the foundation of Constantinople. In addition to bringing these facts together, the author has been at great pains to produce a bibliography, a glossary, and various appendices, which should provide the student of classic antiquity with a clear guide to all of the information that is to be had about this period of three thousand years.

BUSINESS LAW FOR ENGINEERS. By C. FRANK ALLEN. 487 pages, 6¼ by 9 inches. New York: McGraw-Hill Book Co., Inc. \$4.

The author, who is a member of the A. S. C. E. and also of the Massachusetts Bar, formerly professor of railroad engineering at Massachusetts Tech, has set down in this third edition of a work first published in 1917 the elements of law for engineers and everything that it would seem desirable to know about contracts.

WOOD CONSTRUCTION. By DUDLEY F. HOLTMAN. 711 pages, 5¾ by 9 inches. Illustrated with photographs and line diagrams. New York: 1929: McGraw-Hill Book Co., Inc. \$6.

The results of some years of study and compilation by the National Committee on Wood Utilization, established in 1925 by Mr. Hoover, its first chairman. There is far more material here than will ever be utilized by the architect—material of unquestionable value to the lumberman and mill worker.

ÆSTHETIC JUDGMENT. By D. E. PRALL. 378 pages, 6 by 9 inches. New York: 1929: Thomas Y. Crowell Co. \$4.

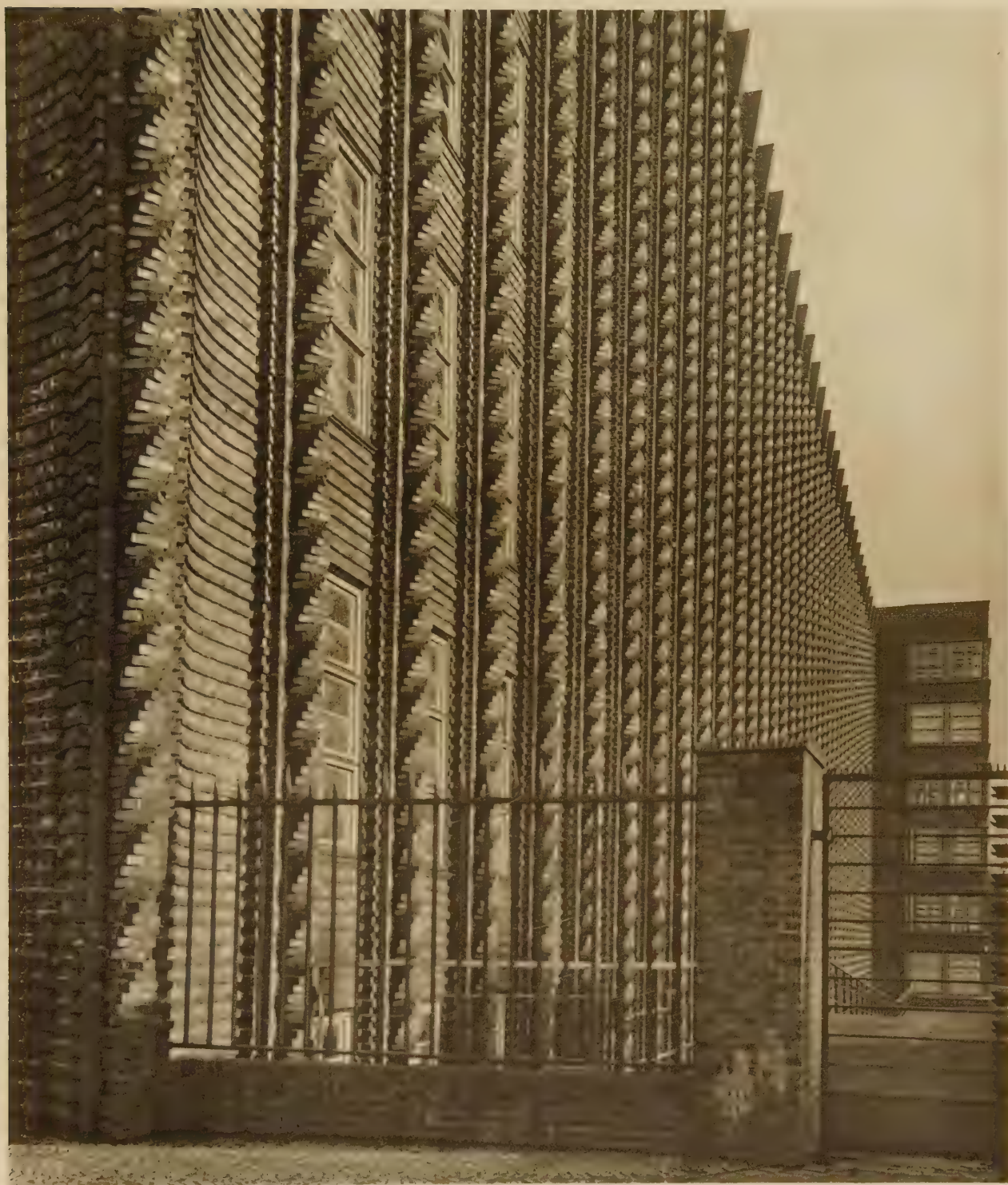
A scholarly presentation of æsthetics in a form which should make it particularly useful in college courses and in the work of schools devoted to music and the fine arts.



A Pictorial Review of Modern Architecture in Europe



By F. R. YERBURY, Hon. A. R. I. B. A.



A FACTORY, HAMBURG

FRITZ HÖGER, ARCHITECT



A FACTORY, HAMBURG
FRITZ HÖGER, ARCHITECT



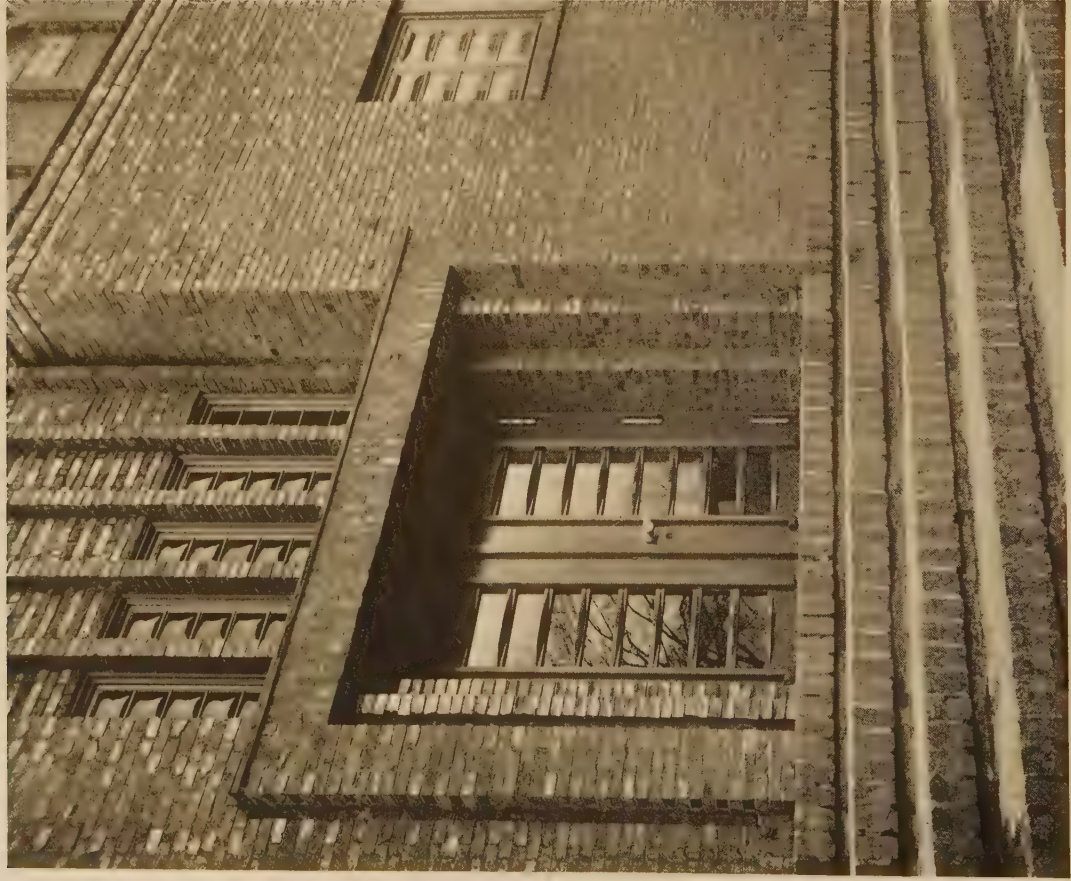
"WEISENHOF," STUTTGART; APARTMENT-HOUSE

PETER BEHRENS, ARCHITECT



"WEISENHOF," STUTTGART; HOUSES

J. J. P. OUD, ARCHITECT

*Entrance*

GIRLS' SCHOOL, HAMBURG.

FRITZ HÖGER, ARCHITECT

*Gymnasium*



GIRLS' SCHOOL, HAMBURG

FRITZ HÖGER, ARCHITECT



GIRLS' SCHOOL, HAMBURG. FRITZ HÖGER, ARCHITECT



The Presentation of Clients' Sketches

An Interview with John F. Jackson, Architect

IS the architect of to-day losing his facility with the pencil? There are plenty of reasons why this might be the case—the increasing use of the camera instead of the sketch-pad for recording details; the increasing speed of modern practice which forces the architect himself away from the drafting-board, leaving to his draftsmen the making of perspective studies.

Whatever the cause, there seems little question as to the fact that the architect's power to translate his ideas into a visualization that will be understood readily by the layman is waning.

This is unfortunate, not for any sentimental reason, but for the very practical reason that the architect is less able to convey to the client his own ideas and to visualize the client's own thoughts as to what he wants.

There are architects, many of them trained in the older school, who still rely constantly upon their ability to draw quickly and vividly in the client's presence. Cass Gilbert's ability to put a real picture of a proposed work on the back of an envelope in the presence of a client or board of directors is well known. Charles Z. Klauder is another architect who almost never talks without



Gottell Fireplace
Camp Hill Gartho
Lake Placid N.Y.
Mr. E. M. J. Blodgett II

John F. Jackson Architect,
New York

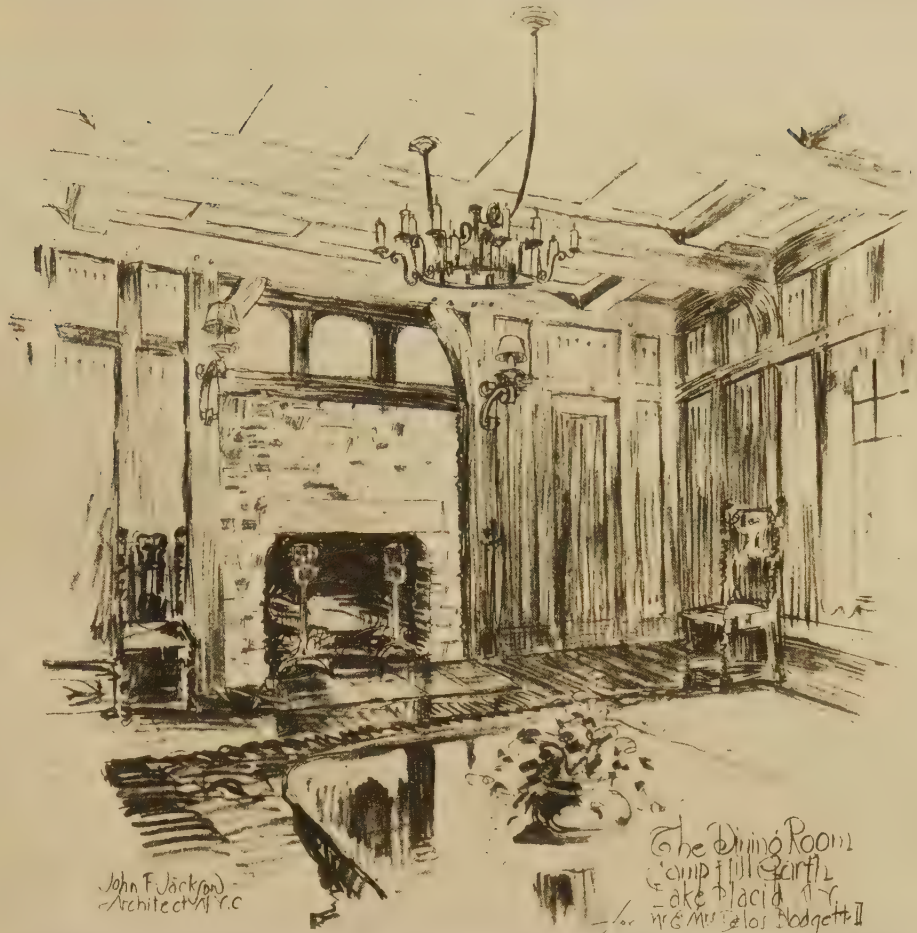
Sketch study of a hall visualization for the client—a proposed treatment of battens for the side walls and heavy beams for the ceiling, with a rough stone fireplace



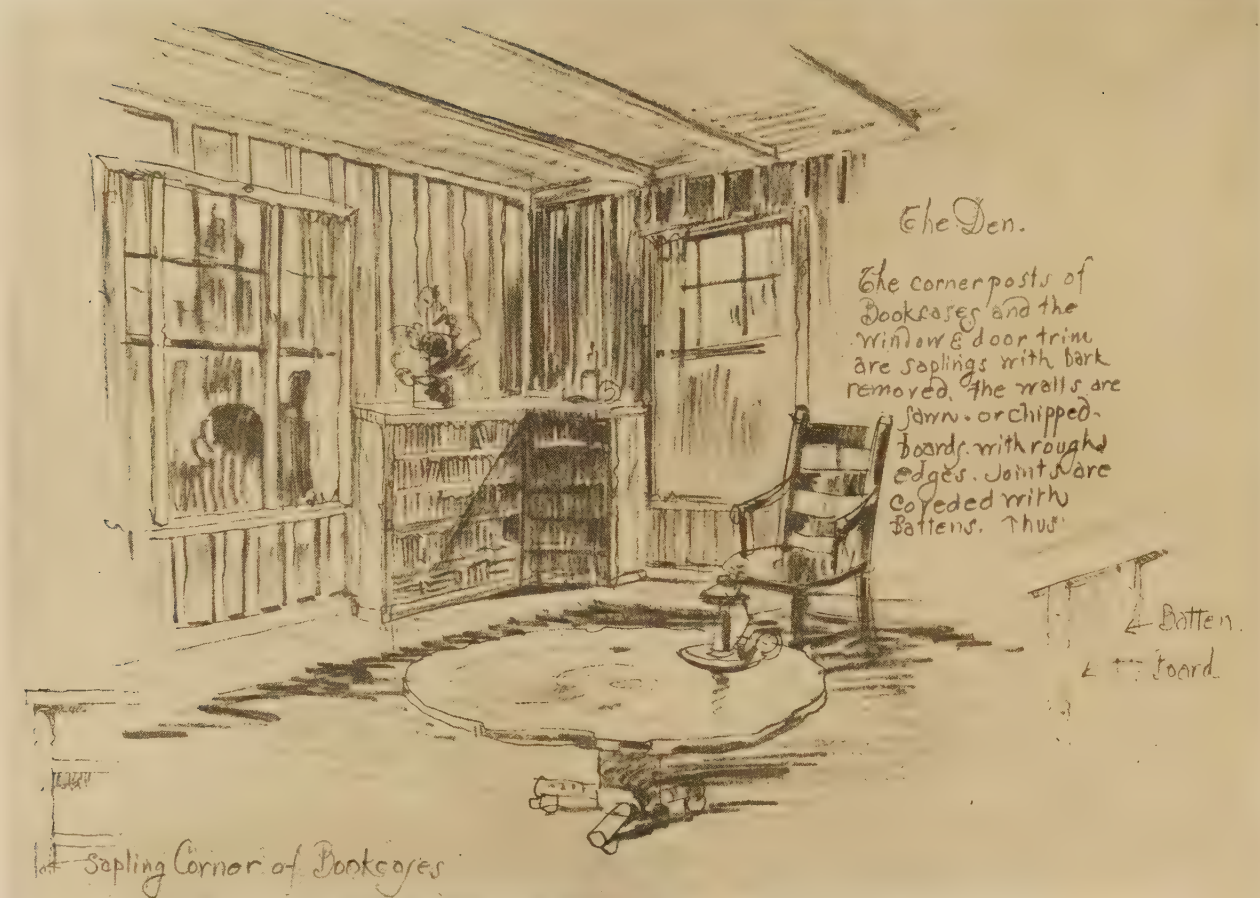
Rapidly drawn visualization of the lake front of the summer camp, in order to crystallize, for both the architect and the client, the working out of a picture window in the centre, and two-story bays. This, it will be recognized, involves questions of roofing and the treatment of the adjacent gables, which could be arrived at satisfactorily only in perspective



Fireplace end of the dining-room, suggesting to the client a proposed treatment of heavy ceiling beams with wood strips over plaster-board between, and the tenon-and-pin structural treatment of the walls. It is out of the question to expect the client to visualize details such as these in plans and elevations



Mr. Jackson's rough sketch with a heavy carbon pencil, indicating roughly the effect of the summer camp on its hillside setting, thickly surrounded by young growth. It gives opportunity also for a study of the effect of projecting gables of different sizes and depths



Mr. Jackson finds it helpful to include in the margin of his sketches certain details of construction or surface treatment which, incidentally, serve later as instructions to the drafting-room

the accompaniment of a busy sketching pencil. Bertram Goodhue's marvellous facility in this form of expression went so far that he drew with either hand.

John F. Jackson uses the preliminary sketch method so constantly and with such facility that a few words as to his technique will perhaps be valuable to others. In his first talks with a client he begins sketching at once, putting the client's own ideas into a form in which the latter can visualize them, and then correcting this first study on a superimposed piece of tracing paper.

Acting upon his theory that the architect's job is to give the client what he wants, provided the latter can be reconciled with good architecture, Mr. Jackson is apt to start with the client's crude idea and carry him along from this to something better. The plan having been tentatively established, he jumps right into perspective representation. This of course is in very rough form at the first sitting, but the next step, when Mr. Jackson studies the problem alone, is quite simi-

lar. Having established the plan, he puts it down in front of him just as if he were about to lay out a mechanical perspective, rotating it until he thinks he has a satisfactory viewpoint. Here is where an idiosyncrasy of Mr. Jackson's comes into play. Having accustomed himself to the practice of transferring his first rough blocking-out of the perspective onto another sheet by rubbing, he therefore, like the etcher, draws in reverse. It is rather weird to see him looking at a plan and rapidly sketching the perspective from it reversed from right to left. Most men would undoubtedly find it easier to draw the perspective as the plan shows it and effect the transfer by tracing or by pencilling the back before rubbing. In all of this work, of course, Mr. Jackson uses a very soft lead pencil on tracing paper, transferring to cameo and finishing with carbon pencil. He occasionally shifts to charcoal and a rougher surface, and sometimes employs color pencils for incidental accents.

These preliminary perspective sketches, how-



Visualizing the effect of the picture window from the inside of living-room—always a difficult feature to harmonize with the rest of the interior and also the exterior

ever, are more than mere pictures. Frequently, as may be seen in one or two of the sketches herewith, he will see some particular bit of construction or detail that may offer a problem and will solve this at once in a thumb-nail marginal sketch. The latter may be in plan, section, elevation or also in perspective. It serves not only to clarify Mr. Jackson's own thoughts as to how an effect is to be secured, but also as unmistakable detail instruction to the drafting-room.

It may be asked why should the architect take his own valuable time to make a perspective

when he can have a draftsman block it out mechanically. Mr. Jackson's answer to this is a story. When he was a draftsman in the office of Green & Wicks, he was frequently given this job of laying out a perspective. Mr. Wicks would come around, look at the mechanical representation and, disappointed at what it failed to show, would say, "Can't you—somehow—cheat it a little, Jack?" In a word, the perspective almost never shows just what we hope it will. Mr. Jackson realizes this and does not hesitate to distort it or show the impossible in the interests of



Here again, in the rough stone fireplace and in the walls adjoining it, a perspective sketch of this rough character shows with some accuracy what is intended architecturally, and also what might be most harmonious in the way of furniture.

finding out how the building is going to look. To put it in another way, he is not so much interested in making a perspective drawing as he is in making a diagrammatic visualization. A school instructor would probably shudder at the liberties Mr. Jackson takes with his vanishing lines and angles of vision, but as the latter points out: "A mechanical perspective is a one-eye view from a fixed point; as for me, I rather like to roll my eyes."

A curious result often follows this practice of

nailing down by actual visualization the client's ideas of what he is going to get. On numerous occasions Mr. Jackson has sketched in some whimsical form of lighting-fixtures, andirons, furniture or what not, only to have the client later insist upon these details just as they were drawn, without the substitution of other forms that may be available. The picture the architect has painted has become so precisely what the client wants that his insistence upon all its hastily drawn details becomes embarrassing.



The undertaking establishment and funeral home of H. M. Patterson & Son was built as a memorial to the late H. M. Patterson by his son. The plans on the next page indicate the comprehensive scope of the establishment and the photographs convey the domestic character that has been given it by the architects

Photographs by Tebbs & Knell, Inc.

"SPRING HILL," ATLANTA, GA.

HENTZ, ADLER & SCHUTZE, ARCHITECTS



The garden, lying beyond the chapel end

"SPRING HILL," ATLANTA, GA.

HENTZ, ADLER & SCHUTZE, ARCHITECTS



Street gable of the chapel wing

"SPRING HILL," ATLANTA, GA.

HENTZ, ADLER & SCHUTZE, ARCHITECTS



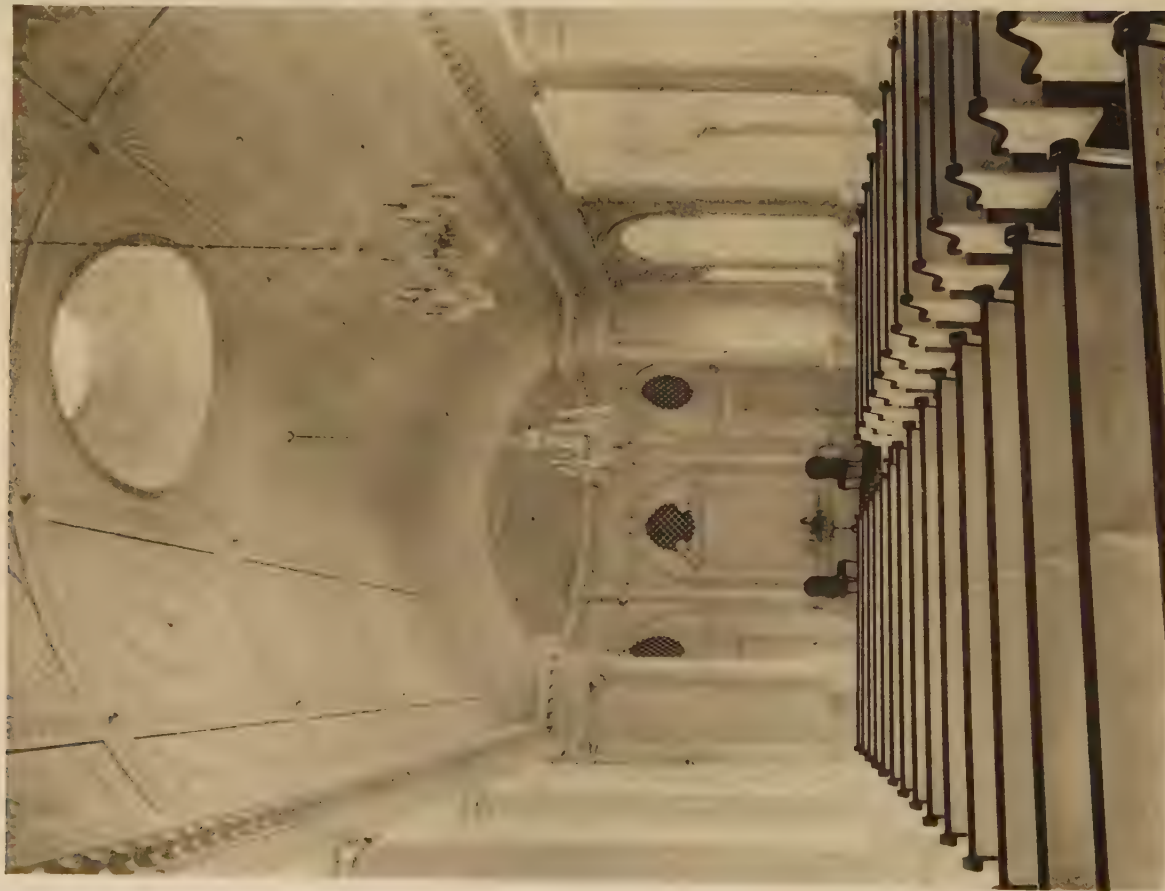
One of the rooms marked "Lounge" on the plan, designed and furnished to suggest the private home



Inside one of the courts

"SPRING HILL," ATLANTA, GA.

HENTZ, ADLER & SCHUTZE, ARCHITECTS



The chapel



Corridor and entrance lobby

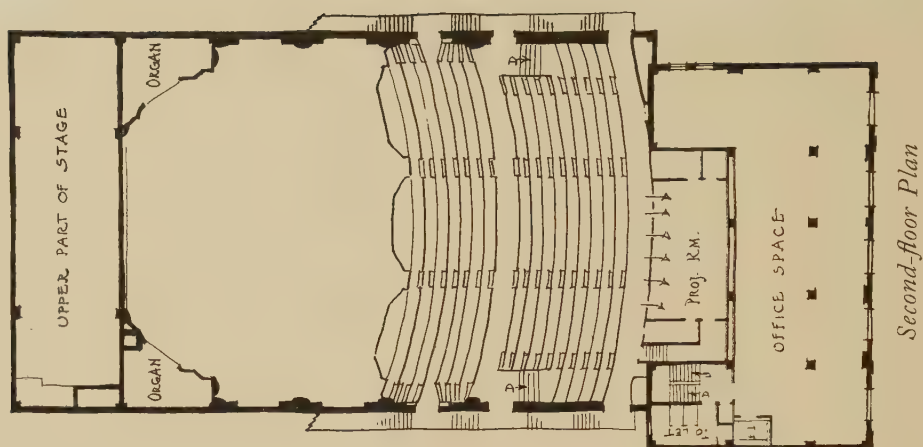
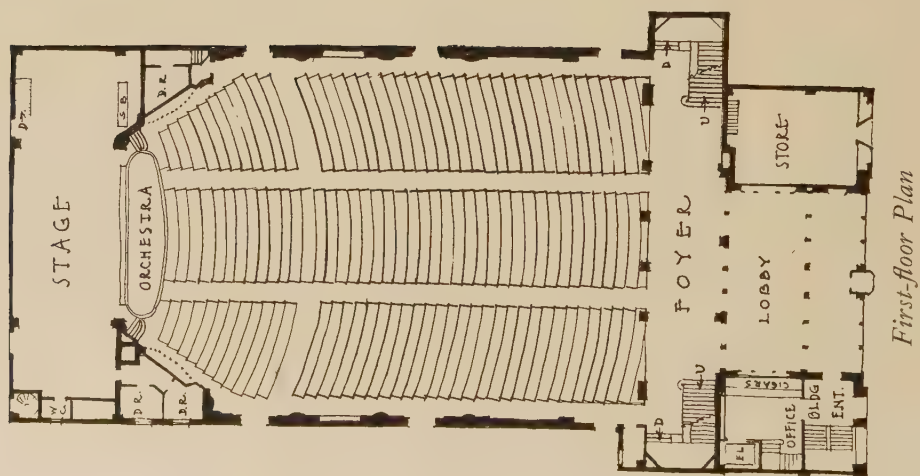
"SPRING HILL," ATLANTA, GA. HENTZ, ADLER & SCHUTZE, ARCHITECTS

Uptown



Photographs by Richard T. Dooner

UPTOWN THEATRE, PHILADELPHIA, PA.
MAGAZINER, EBERHARD & HARRIS, ARCHITECTS



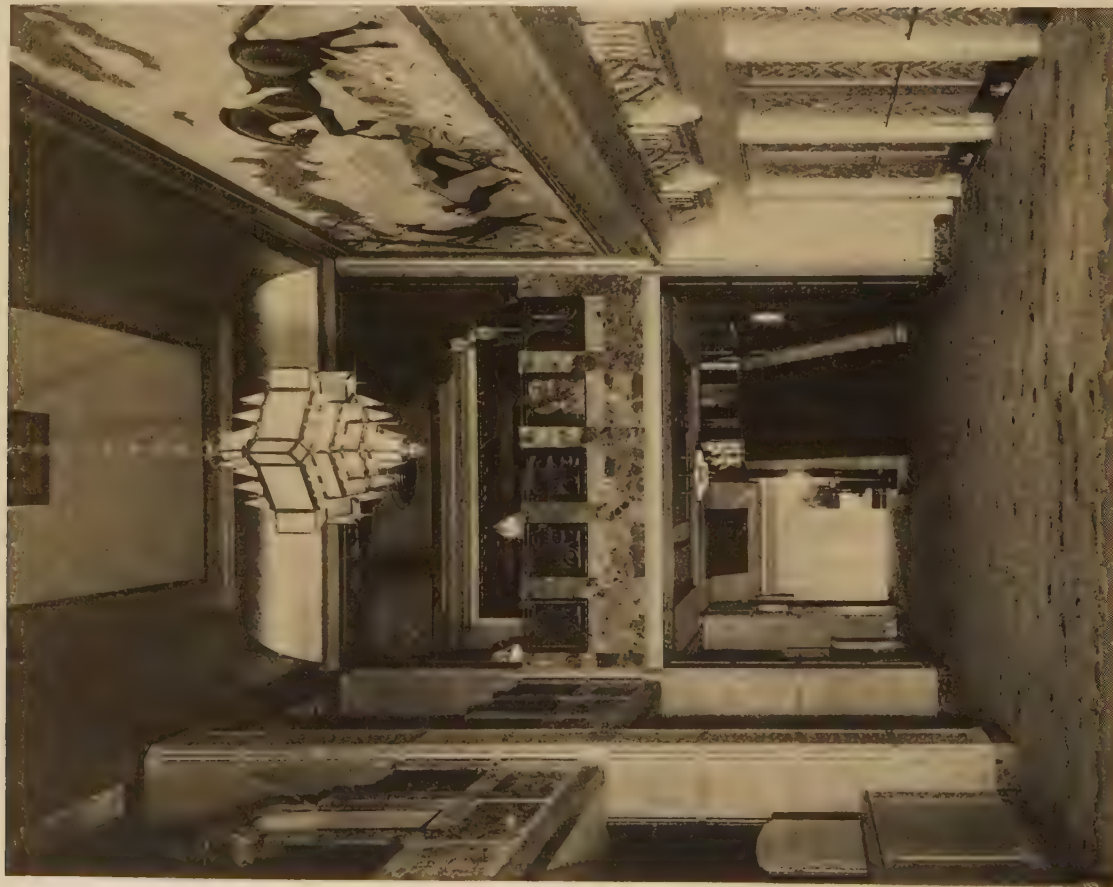
UPTOWN THEATRE, PHILADELPHIA, PA.
MAGAZINER, EBERHARD & HARRIS, ARCHITECTS



Foyer on the mezzanine floor

UPTOWN THEATRE, PHILADELPHIA, PA.

MAGAZINER, EBERHARD & HARRIS, ARCHITECTS



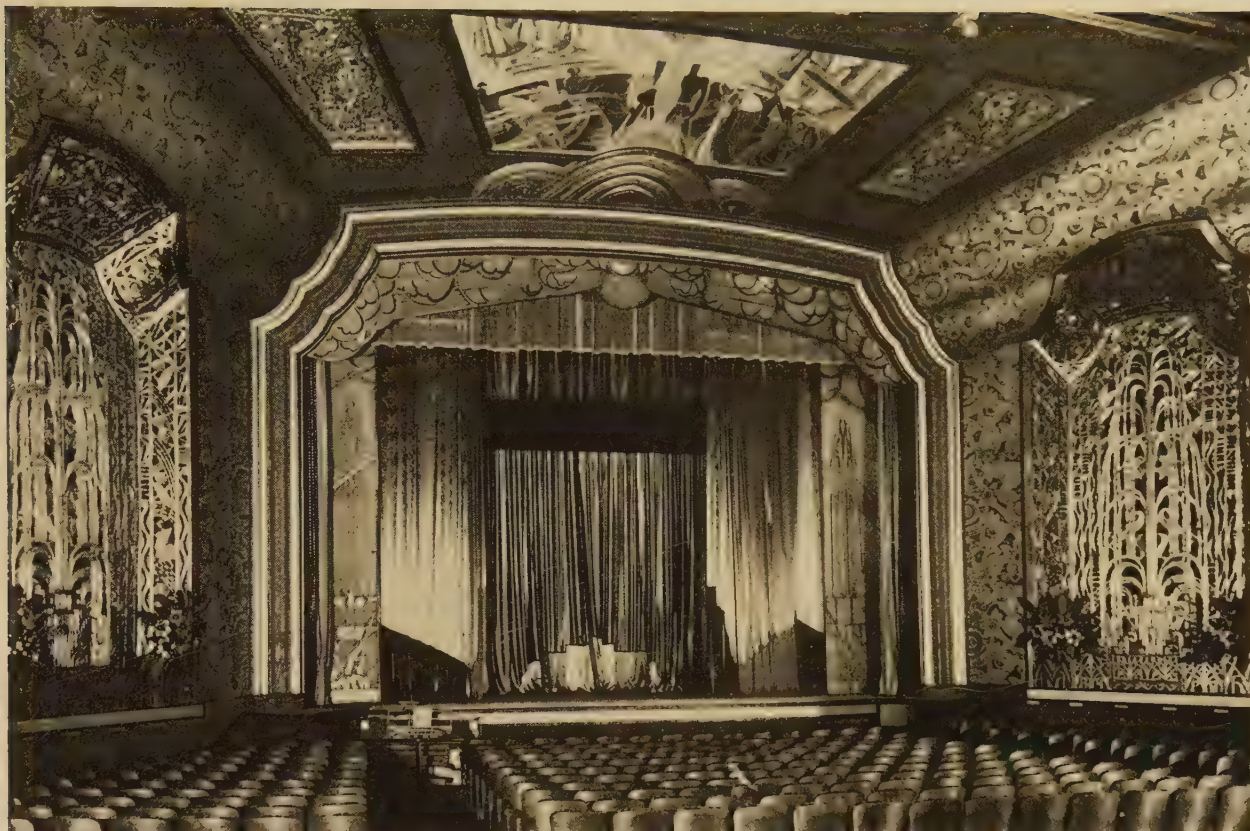
The foyer

UPTOWN THEATRE, PHILADELPHIA, PA.



Stairway from mezzanine

MAGAZINER, EBERHARD & HARRIS, ARCHITECTS



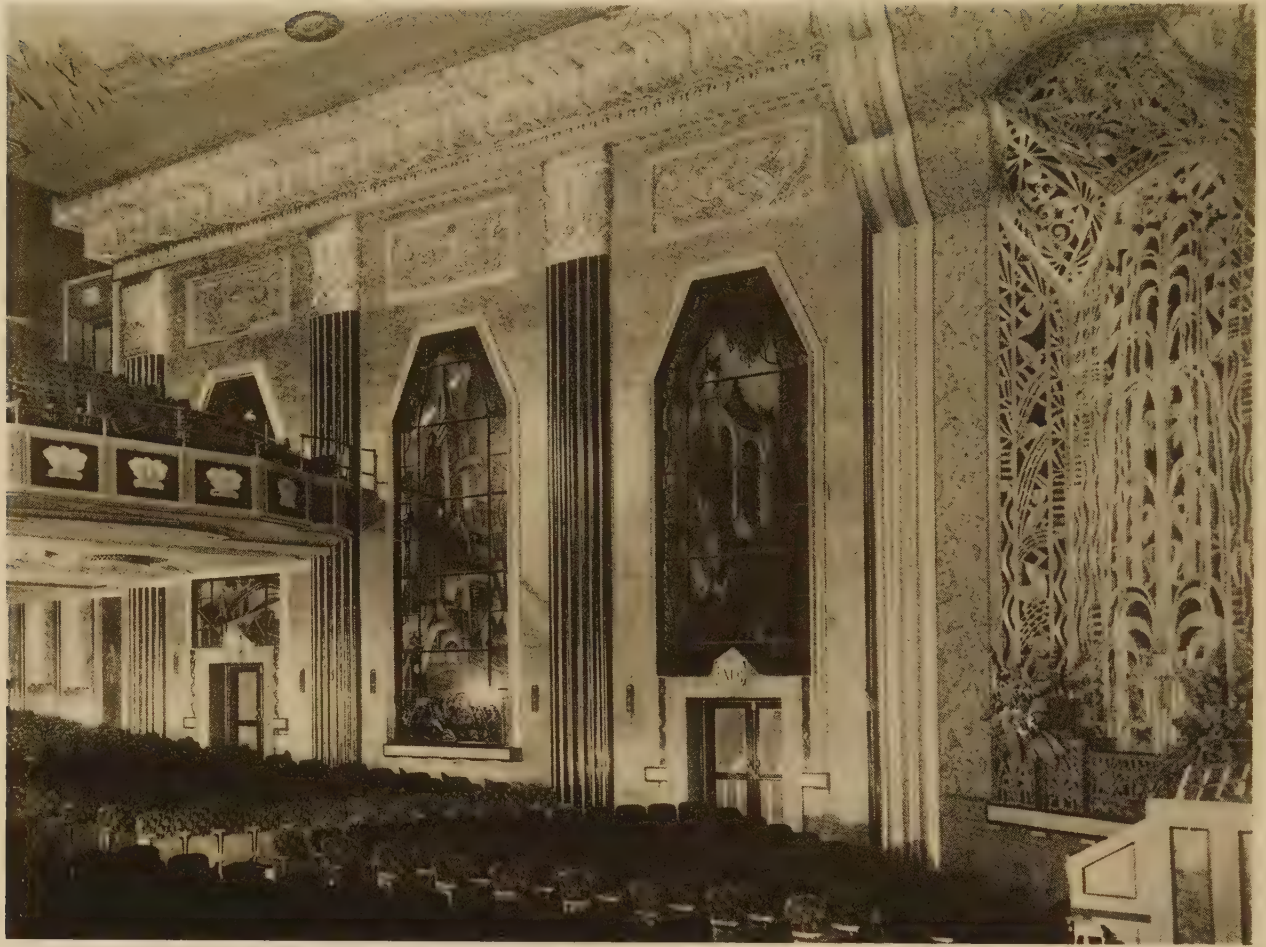
Proscenium and organ grilles

Smoking room



UPTOWN THEATRE, PHILADELPHIA, PA.

MAGAZINER, EBERHARD & HARRIS, ARCHITECTS



Side wall and balcony detail

The powder room



UPTOWN THEATRE, PHILADELPHIA, PA.

MAGAZINER, EBERHARD & HARRIS, ARCHITECTS



OFFICE BUILDING,
111 JOHN STREET,
NEW YORK

BUCHMAN & KAHN,
ARCHITECTS

Sigurd Fischer

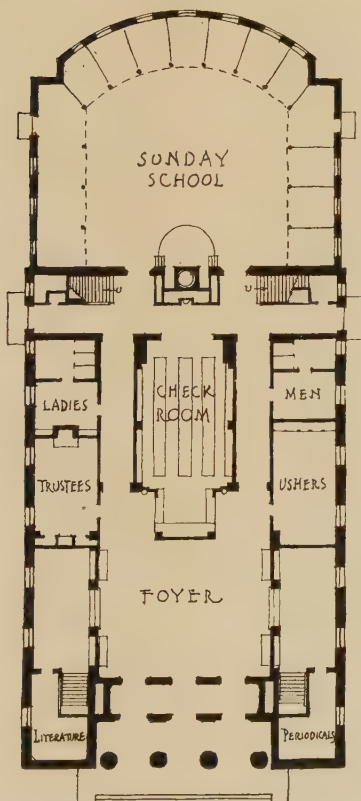


Sigurd Fischer



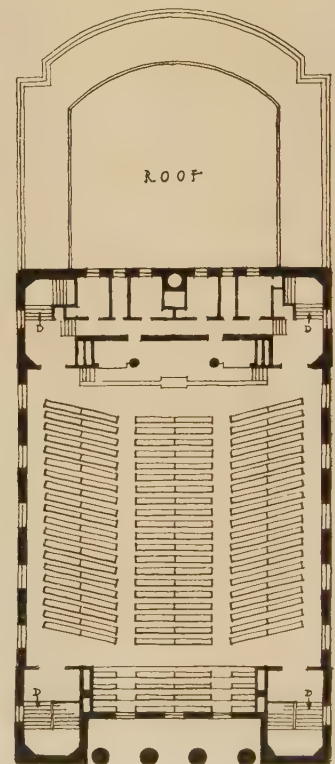
Sigurd Fischer

OFFICE BUILDING, 111 JOHN STREET, NEW YORK
BUCHMAN & KAHN, ARCHITECTS



Ground-floor
Plan

Second-floor
Plan



SECOND CHURCH
OF
CHRIST SCIENTIST,
DAYTON,
OHIO

SCHENCK & WILLIAMS,
ARCHITECTS

Photographs by Mattie Edwards Hewitt



SECOND CHURCH
OF
CHRIST SCIENTIST,
DAYTON, O.

SCHENCK
&
WILLIAMS,
ARCHITECTS



ARCHITECTURE'S PORTFOLIO

OF AIDS *to* FENESTRATION

❖ ❖ ❖ *Subjects of Previous Portfolios* ❖ ❖ ❖

DORMER WINDOWS—	Nov., 1926	BAY WINDOWS—	Apr., 1928
SHUTTERS AND BLINDS—	Dec., 1926	CUPOLAS—	May, 1928
PANELLING OF THE ENGLISH TYPES—	Jan., 1927	GARDEN GATES—	June, 1928
STAIRWAY DETAILS (GEORGIAN, EARLY AMERICAN, ETC.)—	Feb., 1927	STAIR ENDS—	July, 1928
STONE MASONRY TEXTURES—	Mar., 1927	BALCONIES—	Aug., 1928
ENGLISH CHIMNEYS—	Apr., 1927	GARDEN WALLS—	Sept., 1928
FANLIGHTS AND OTHER OVERDOOR TREATMENTS—	May, 1927	ARCADES—	Oct., 1928
TEXTURES OF BRICKWORK—	June, 1927	DECORATIVE PLASTER CEILINGS—	Nov., 1928
IRON RAILINGS—	July, 1927	CORNICES AND ENTABLATURES OF WOOD—	Dec., 1928
DOOR HARDWARE—	Aug., 1927	DOORWAY LIGHTING—	Jan., 1929
PALLADIAN MOTIVES—	Sept., 1927	FIREPLACES OF ENGLISH TYPES—	Feb., 1929
GABLE ENDS—	Oct., 1927	GATE-POST TOPS—	Mar., 1929
COLONIAL TOP-RAILINGS OF WOOD—	Nov., 1927	GARDEN STEPS—	Apr., 1929
CIRCULAR AND OVAL WINDOWS (CLASSIC AND RENAISSANCE)—	Dec., 1927	RAIN LEADER HEADS—	May, 1929
BUILT-IN BOOKCASES—	Jan., 1928	GARDEN POOLS—	June, 1929
CHIMNEY TOPS—	Feb., 1928	QUOINS—	July, 1929
DOOR HOODS—	Mar., 1928	INTERIOR PAVING—	Aug., 1929
		BELT COURSES—	Sept., 1929
		KEYSTONES—	Oct., 1929

SUBJECTS IN PREPARATION FOR FUTURE ISSUES

Balustrades	Clock Towers	Garden Shelters	Pulpits
Bank Check Desks	Corbels	Gothic Doorways	Second-story Porches
Bank Screens	Driveways, Entrance	Gothic Niches	Stucco Textures
Banking-room Furniture	Elevator Doors	Hanging Signs	Treillage
Brick, Moulded	Entrance Porches	Organ Cases	Urns
Business Building Entrances	Fences	Outside Stairways	Verandahs
China Cupboards	Finials	Over-Mantel Treatments	Weather vanes
Circular Gothic Windows	Flèches	Patios	Window Grilles

Photographs showing interesting examples under any of these headings will be welcomed by the Editor



WARREN, KNIGHT & DAVIS



GLOUCESTERSHIRE, C. 1828

YORK, ENGLAND (SEVENTEENTH CENTURY)



BEDFORDSHIRE, C. 1728





PORTSMOUTH, N. H.



PORTSMOUTH, N. H.

WORCESTER, ENGLAND



YORK, ENGLAND





EDWARDS & SAYWARD



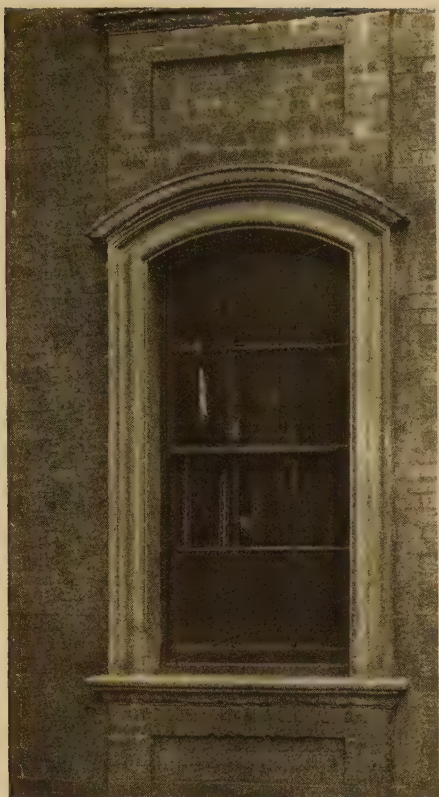
THOMAS WHITE, pupil of Wren

ANDREA PALLADIO



CROFT & BOERNER





THOMAS WHITE, pupil of Wren



ALMSHOUSE, YORK, ENGLAND

PAUL P. CRET

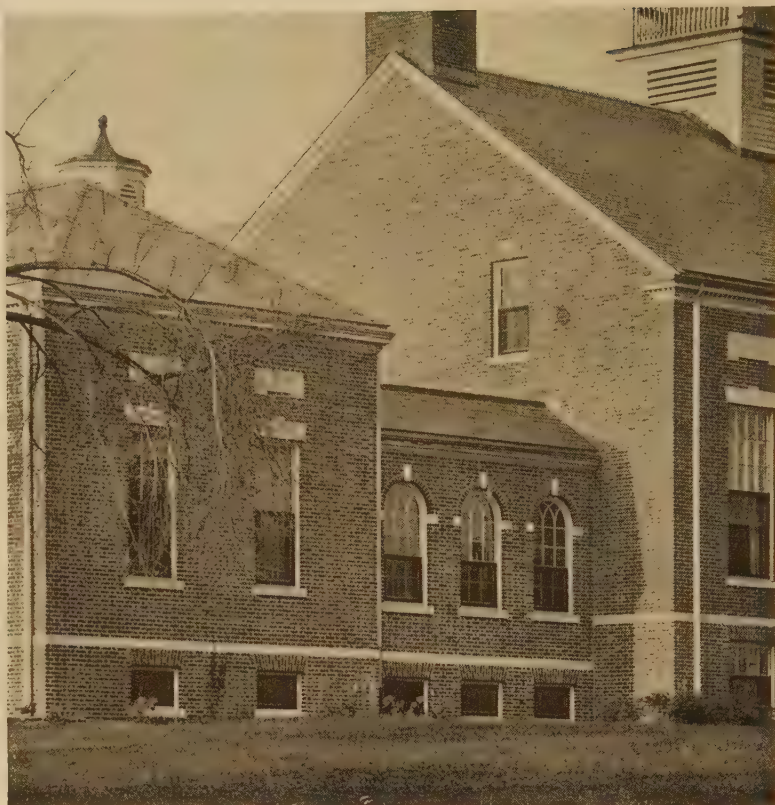


HOMEWOOD, BALTIMORE





FELLHEIMER & WAGNER

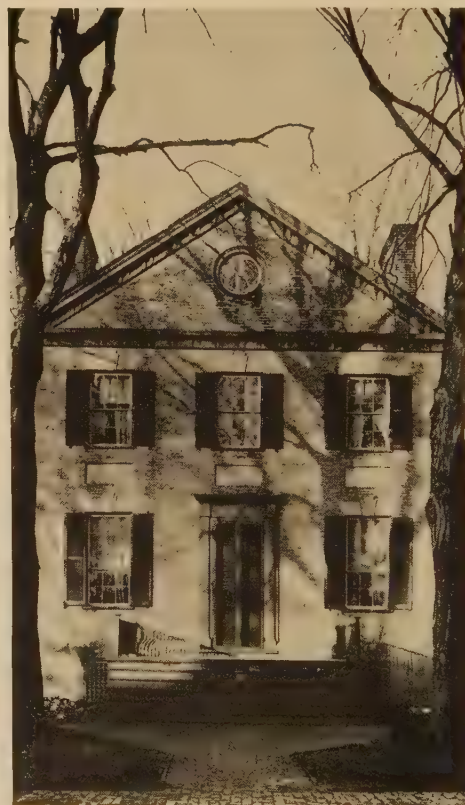


KILHAM, HOPKINS & GREELEY

CARRÈRE & HASTINGS



SOMERSET, MD.





PALMER & LAMDIN



WALKER & WEEKS

COOLIDGE, SHEPLEY,
BULFINCH & ABBOTT



CARRÈRE & HASTINGS





ROBERT S.
DE GOLYER & CO.



KIMBOLTON,
NORTHANTS
(EIGHTEENTH
CENTURY)



PAUL P. CRET
AND—

ZANTZINGER
BORIE & MEDARY

EDWARD L. TILTON
& ALFRED
MORTON GITHENS

LEIGH FRENCH, JR.



Saturday, August 24.—Saint Paul has little new work that my ramblings disclosed, excepting a charming small building for Kodak Stores by Clarence H. Johnston.

In lieu of recently completed work I wandered out to see some of the older monuments—E. L. Masqueray's great Cathedral in the Classic Renaissance, and Cass Gilbert's Minnesota State Capitol.

The former fabric is slowly progressing as to the interior finish, under the sympathetic and able hands of Maginnis & Walsh, of Boston. Its vast dome, 96 feet in diameter and 186 feet above the floor, is impressive, if you like the St. Peter's type, though still a bit cold in its unbroken gray above the buff walls that extend to the spring of the arches.

Even in these latter days one meets so frequently a dome that is either too large or too small for the substructure. Mr. Gilbert's Capitol satisfies completely in this respect, beautifully proportioned. I have an idea that if he were designing this building to-day he would strive for greater areas of unbroken walls, a flattening or even an omission of some detail.

Sunday, August 25.—Back in Chicago once more—the city of contrasts, where the latest word in twentieth-century building stands cheek by jowl with the most disgraceful, ramshackle piles in the whole United States; where the architectural embellishments of Grant Park on the Lake front are littered with disreputable tramps and their half-eaten package lunches. And yet Chicago has a city pride that, when aroused, accomplishes the seemingly impossible.

Building proceeds here at a breathless pace. Since February 1, when I was last here, the two great piles facing one another across the river have been practically completed—Holabird & Root's Daily News Building and Graham, Anderson, Probst & White's Civic Theatre. Alschuler's Medinah Athletic Club rears its medley of many architectural forms to the north of The Tribune Tower; the stately Palmolive Building, also by Holabird & Root, is about finished, depending for its beauty almost solely upon its mass and harmoniously related parts rather than upon detail. The John G. Shedd Aquarium, near the Natural History Museum, is practically free of its scaffolding; the Carbon and Carbide Building lifts its great gold chimney high above its green terra-cotta shaft on North Michigan Ave.; and on nearly every block of the latter, above the Art Museum, there is building activity that promises interesting results.

Monday, August 26.—Spent almost the whole day with Earl Reed and John Root over the details of an early issue of the magazine to be devoted to the recent work of Holabird & Root, chiefly the great office-buildings, both here and in



The Editor's Diary

other cities, which have engaged the efforts of this firm in the past few years. Enough of this work has been published, largely in preliminary drawings and model studies, to acquaint the profession with the fact that here are some of the finest fruits of American architectural design as of to-day, founded upon traditional training but expressing itself in the materials and methods of our own time.

Tuesday, August 27.—One should be spending at least a week here instead of a few crowded days, for there is much to repay the inspection of the architectural pilgrim. The Daily News Building alone could easily furnish a profitable day of inspection, and, there is the new building for the Women's Club, another for the Chicago Motor Club—all three from the Holabird & Root office. The Forman National Bank Building, of Graham, Anderson, Probst & White, is another essay reminiscent of Halicarnassus as to its pyramidal stone roof. Saks Fifth Avenue is one of Holabird & Root's "furthest modern" efforts, plentifully endowed with the sparkling crisp lines and surfaces of bright untarnishing metals; and the same firm's building at 700 North Michigan Avenue is a particularly successful handling of large



The base of 700 North Michigan Avenue, Chicago—all glass fixed, and doors in the piers. Holabird & Root, Architects

glass areas in the base of a stone structure. Here the glass is quite flush with the building line, permanently set in the two lower stories, ventilation being cared for mechanically. The lower story alternates moderate size glassed openings with smaller ones which become in many cases the doorways to the individual stores. The treatment very cleverly avoids the usual weakening effect of too many large voids as a base for the superstructure.

Wednesday, August 28.—Arriving in Cleveland, I called on Mr. Thomas of Howell & Thomas, and was told that one of the best things recently done in the vicinity is Shaker Square, a suburban centre designed by Philip Lindsley Small & Associates. A visit confirmed Mr. Thomas's judgment. To the art centre for a sight of Hubbell & Benes's Museum with its new fountain; with Goodhue's Epworth Euclid Church near by. The latter's great roof of copper seems rather too heavy and oppressive—I wonder if the rumor may be true, that Goodhue intended to do this in slate. Greco and Reed's synagogue, not far away, drew me over to refresh my impression of its impressive bulk and restrained detailing.

Down-town, the Auditorium has two new end extensions, there are a few new buildings here and there, but nothing that I saw was particularly refreshing.

Great crowds have awaited the coming of the *Graf Zeppelin* all day, to help celebrate the National Air Races being held here, but it was not until nearly midnight, as the Detroit night boat was leaving her berth, that from her upper deck I heard the hum of distant air motors and the city's eager searchlights picked up the silvery dirigible out of the cloudbanks. Circling around us, she bore off southeast into the darkness, to complete by morning her round-the-globe journey.

Thursday, August 29.—Awoke in Detroit, after an interval of nearly two years since my last visit. Spent an hour with Charles O. Cook, of Smith, Hinchman & Grylls, listing new work that I should see. Then to see the Union Trust Building whereon the firm named has lavished color in great quantity and variety—rather too much so inside, to my taste. The use of color in architecture is still somewhat of a dangerous experiment, for we really know very little about the individual's reaction to color except that it varies widely. The navy's tests for color comprehension show marked differences between men as to color consciousness. So far as we know, nothing of this sort has been tabulated, but these results should eventually provide some sort of guidance for designers.

The Penobscot Building, by the same firm, is a dominating skyscraper that, in its gray stone, depends for its effective-

ness upon its soaring buttressed mass and diminishing silhouette, with a limited amount of untraditional ornament in rather large scale. The same architects' Bell Telephone Building is an interesting example of how the development of style over a period of a few years can be expressed in the addition of upper stories to a building begun in the traditional forms.

Since my last visit Albert Kahn's Fisher Building has been finished, and it is well worth coming a long way to see. From a distance its gray mass blended so closely with a cloudy sky as to give it an ethereal quality of great charm.

Paul Cret's Institute of Arts held me for several hours as I noted detail after detail that showed the consummate skill of a great designer. In form and color both, the interiors, designed to furnish backgrounds and settings for the various periods of art, are true backgrounds, never obtruding their own character beyond the exhibits of which they comprise the setting. But why, one asks, does a city, with such splendid architectural monuments as this and Cass Gilbert's Library that faces it, permit both to be marred by the lines of heavy overhead wires that stretch along Woodward Avenue between them?

Friday, August 30.—Spent several hours roaming about the city, looking at Donaldson & Meier's Stott Building with its varicolored tile spandrels in the vertical lines of windows—effective enough at a distance of several blocks but less so upon closer approach; the Women's Club and Wilson Theatre by Smith, Hinchman & Grylls; the Pontchartrain Club in process of construction, by the same firm; the Detroit Times Building by Mr. Kahn, nearly completed; and many smaller structures recently built or still in the making.

Leaving all this, I journeyed north to Cranbrook to see Christ Church. Bertram Goodhue and his associates have produced another masterpiece of Gothic design and craftsmanship here, dominated by its carillon tower and dazzling in its light buff stone. It is still somewhat painfully new, needing more planting and especially some ivy, but the architects at least have done their part. I had thought that we in America had arrived at a sense of security in respect to churches that would permit us, like the Europeans, to leave them open. Not so here, though after considerable prowling I did manage to enter a basement door, felt my way up a pitch-dark circular stairway, and gloated over the interior. The stained glass, by Bonawit, Gordon Guthrie, and Harry Wright Goodhue, is particularly fine, and the combination of carved oak and wrought iron in the narthex screen a lovely piece of craftsmanship.

After some meanderings about the



Walker & Weeks's present-day adaptation of Gothic in a church at Cleveland

Bloomfield Hills section, where the architects have so freely and skilfully used white-painted cement blocks in combination with brick, with shingle tile roofs, back to Detroit to pack and take the night boat across Lake Erie.

Saturday, August 31.—Back in Cleveland and lucky enough to find F. R. Walker (Walker & Weeks) in his office for the short day. Reminiscing for a few moments of Massachusetts Tech days together, he showed me his well-planned offices, where nearly everything is studied by modelling, exteriors and interiors, the latter models with ingenious arrangements for trying out all sorts of lighting and color. Went out to see his firm's Allen Memorial Medical Library, a magnificently appointed building near the Museum, and then to the Heights to see two recently completed churches in a flat, sturdy adaptation of Gothic motives that have a distinctly twentieth-century character.

Sunday, September 1.—Arriving in Buffalo, I find myself in Fellheimer & Wagner's recently finished railroad station, well on the outskirts of the city. Its exterior is effective in mass, and its unusual plan seems to function very well. The modern detail inside is, to my taste, not so happy. Down-town, the Rand Building catches the eye at once with its white brickwork, simply accented verticals, and curious lantern-top. An addition to the old telephone building is even more interesting, with good flat-plane ornament in restrained use—Voorhees, Gmelin & Walker, doubtless.

There must be something repressive in this northern belt. A rather painstaking search through the new residential districts failed to prompt the opening of my camera once in the whole afternoon; the houses have an almost universal hardness about them, whatever their size or type, and fail to show, on the part of their designers, a really sympathetic use of materials. What is it? Probably I was unfortunate enough to miss the good ones, or had been travelling so long as to have blunted my perception.

Tuesday, September 3.—Back in the New York office after two months' absence to attack an accumulation of work that appears surprisingly moderate in its orderly piles on my desk, but in which doubtless lurk demands for midnight-oil consumption.

The summer has taken a heavy toll from the profession: Milton Medary in the very prime of his expanding career; Henry Forbes Bigelow, of Boston, whose fame will long endure as a master in architecture, particularly of brick; William Burnet Tuthill, after a long and productive professional life, in which his acoustical triumph of Carnegie Hall stands forth; and Geoffrey Scott, author of "Architecture and Humanism"; to mention only those whose names I find before me to-day.

Wednesday, September 4.—A letter dated from Munich comes from Milton D. Lowenstein, holder of a Guggenheim fellowship, which I believe he would permit me to share with others:

"I am now getting back on familiar territory again.

"After Gothenberg, Oslo, Stockholm, Helsingfors, Copenhagen and Amsterdam, I am making a hurried 'survey' through France, Germany and Italy. The tempo of architecture is slower in these countries and my note-books are not accumulating as they were when I was in Scandinavia.

"Amsterdam really marked the limit of that extraordinary activity which is sweeping the northern countries along a road leading no one knows where, but which everybody seems anxious to follow. I believe that as long as there continues that savor of idealism which is inherent in Östberg's and Dudok's work, neither Europe nor America will look too closely into the underlying philosophy but be content to follow where there is any philosophy at all suggested.

"Each country that was in the war is accepting some part of the former neutrals' programme and adapting it to the indigenous conditions. And the results viewed in the light of these efforts are sometimes very pitiful. A city like Strasbourg has lost its old civic spirit and substituted a kind of an ultra-modern masquerade in architecture which has no place, æsthetic or practical, as a solution to its fundamental problems. What Dudok builds in Amsterdam has a legitimate ancestry, and so-called 'functionalism' does not stick skinny elbows through the worn rags of neglected tradition. Like France, Alsace-Lorraine must assimilate in some way its war experience before it can proceed with a programme based upon a peaceful growth.

"There are some startling exceptions to the tawdriness that results from slavish adherence to the Scandinavian examples. The city of Stuttgart, partly because of its geographical isolation,

partly because of the genius of men like Bonatz and Scholer, is pursuing an independent course while calmly studying the efforts of others. I think its railroad station built in the beginning of the war had a steadying influence on subsequent construction."

Friday, September 6.—Two months away from New York is a long, long time in these days. Structures which were meaningless webs of steel when I left are now completely enclosed and helping to form new skylines. The Chrysler Building is sticking its needle top far above the Grand Central district, its spandrels of bright metal fairly screaming for attention. Further east on 42d Street, Raymond Hood's Daily News Building is piling up its white-brick encasement of unornamented piers, with a new vari-colored brick spandrel that promises to be effective in linking the voids of vertical window ranges.

To see an apartment which Lee Simonson has done in the new Delmonico's on Park Avenue, using Mexican mahogany with silver strips—clever and chic, but I'd rather not live with it myself.

Saturday, September 7.—Joined Arthur Covey, Leon Solon, and Paul Jennewein at luncheon in the League clubhouse. The latter had brought with him one of his assistants, Mr. Kreis, just back from a visit to Germany. He reports an amusing and encouraging rivalry among the cities over there to be known as the homes of artists. Munich has, of course, always had plenty of them, attracted by the atmosphere of the place itself. Cologne and others among the northern cities are making strong inducements in nominal studio rents, and even in monthly cash allowances, to certain artists they wish to adopt.

Monday, September 9.—A motor-car containing Raymond Hood and Eliel Saarinen, driven by Hood's Japanese chauffeur, skidded into a telegraph-pole last week, breaking Hood's right arm and bruising Saarinen rather plentifully. Too valuable a cargo for taking any chances! Hood tells me his designing arm is going to be better now, having more bone in it.

Tuesday, September 10.—Over into Pennsylvania, up the lovely valley of the Schuylkill. Every time I see this country I am struck by its resemblance to the English countryside—lush growth along the streams' banks, a scattering of honest, unpretentious stonework, a sort of forthrightness in the farm buildings that must have come from the original English settlers and which persists even into these days.

Wednesday, September 11.—With three-quarters of an hour to spare be-

tween trains in Philadelphia, I had time to walk over through the busier parts of Chestnut, Walnut, and Locust Streets, finding two small bank buildings of real charm—that of G. B. Clark & Company at 17th and Locust, one of the last works with which Milton Medary was concerned; and a banking-house on Walnut above 15th by Ritter & Shay.

Thursday, September 12.—Lunching with Buckminster Fuller, who hatched out the Dymaxion House idea, when Ralph Walker joined us and accused Fuller of being a reactionary—holding to ideas belonging to the Middle Ages. The idea of industrialized housing as developed by Fuller contemplates the individual dwelling, isolated and self-contained. Walker brings up the fact that all housing of this age is tending toward the community types—the apartment or the multiple dwelling, and away from the individual house. Why spend so much thought on the individual dwelling when it is soon to be a thing of the past? Fuller's retort was that the movement toward community housing is brought on us by economic pressure. Give a man what he wants and can afford, through industrially produced housing, and he will cling to his isolated castle.

Friday, September 13.—Down-town to have a look at the new Western Union Building which Voorhees, Gmelin & Walker are just completing. A glorious mass of glowing color in the sunlight, built of a pink brick, grading from a purplish brown at the base to a light orange pink at the top. There is scarcely a bit of decoration on the exterior, yet it pulls the eye to every point of its great mass through the skilful juxtaposition of planes that recede and advance by the very slightest amounts of separation—a symphony in planes, keyed high in a warm color of unusual

vitality. Ralph Walker has promised that we may publish it when the proper time comes.

Tuesday, September 17.—To a luncheon given by Lucy Embury Hubbell at the Ritz and thence to see some furniture and panelling brought over from France. Most of it lacked the preponderance of curved lines and elaborate carving that we are prone to associate with the French periods, showing instead a refinement of line and a perfection of craftsmanship in wood that made me wonder how long it will be before we experience a reactionary distaste with the harsh lines and metal surfaces that the contemporary designers are producing so freely.

Wednesday, September 18.—Charles Z. Klauder in for a hasty call, so full of enthusiasm over a new building stone he had just discovered that he would scarcely listen to the flattering reports of how his book, "College Architecture in America," is selling.

Down to Griffith Baily Coale's studio on West 11th Street—an old house remodelled some years ago for Daniel Chester French, to have a look at Coale's big murals for Haddon Hall, Atlantic City, before the canvases are rolled on drums and shipped down to be bedded in a thick coat of white lead on the plaster walls. A magnificent group of ten, painted in the narrowest range of color, far from both white and black, and showing exteriors and interiors in an astonishing duplication of colors.

Thursday, September 19.—To a luncheon at the Engineers' Club given by the American Institute of Steel Construction. W. C. Clark told us of his investigations into the economics of high office-buildings—resulting in a plotted curve showing, for an expensive site a city block in area, that the maximum return would be from a building even higher than anything yet built. The future tendency must be toward larger sites—preferably a whole city block—for buildings situated in locations of great concentration of business. There is much of interest in Mr. Clark's report, which is printed in part on page 311.

Friday, September 20.—Chester Price, whose architectural renderings have added interest to most of our exhibitions in recent years, tells me that he is sailing for England to enter the Royal College and study etching. There seems to be a well-worn path in that direction, bearing the footprints of Louis Rosenberg, Samuel Chamberlain, and Gerald Geerlings. We are getting some splendid etchers as a result, but are there enough men coming along to fill the renderers' shoes? If we could get a few more to equal Ernest Born and Floyd Yewell there would be little cause for worry.



A corner of Philip Lindsley Small's Shaker Square on the outskirts of Cleveland



{ ARCHITECTURE }

CHARLES SCRIBNER'S SONS, PUBLISHERS

Painted by Francis Scott Bradford for the International Telephone and Telegraph Co. and now panelled over the fireplace in the Directors' Room in the new building at Broad and Beaver Streets, New York. The lettering of the oceans is in gold leaf on cerulean. Names of islands are painted on the scrolls

CONTACTS

DEVOTED TO A BETTER UNDERSTANDING OF THE BUSINESS SIDE
OF ARCHITECTURE AND ITS RELATION TO THE INDUSTRIES

The Economic Height of Buildings

SKYSCRAPERS 2,000 feet or two-fifths of a mile in height are structurally possible, although the economic height is much less, according to a study just completed for the American Institute of Steel Construction. This study of building height has been in progress for the past two years under the direction of W. C. Clark, chief economist and vice-president of S. W. Straus & Co. It was made for the Institute by independent research for the purpose of providing unbiased proof that tall buildings in congested centres are economically advisable. The report found that buildings of seventy-five stories in height are not only economical but under certain conditions will return more on the investment than a building of fifty or thirty stories in height.

These conclusions were based upon investigations made upon specific plans for various buildings of varied heights drawn by J. L. Kingston, architect, of the staff of Warren & Wetmore. In making the studies the co-operation of numerous experts was enlisted, such as Stephen F. Voorhees, of Voorhees, Gmelin & Walker; R. H. Shreve, of Shreve, Lamb & Harmon; David Lindquist, chief engineer of the Otis Elevator Co.; S. F. Holtzman and David C. Coyle, of Gunvald-Aus, consulting engineers; Levering & Garrigues and McClintic-Marshall, steel fabricators; Otto Goldschmidt, consulting engineer and expert on mechanical equipment; Hatzel & Buehler, electrical constructors; W. G. Cornell Co., plumbing; and in the building managers and rental field such experts as Lee Thompson Smith, Clarence T. Coley, and William C. Demorest. To quote from the report:

"Few public questions are now being debated with more heat and more persistence. At the one extreme we have a group of critics, chiefly city planners of the more doctrinaire type, who are bitter and ex-

travagant in their criticism of the skyscraper, who find in it the source of most of the evils in our city life and who advocate a definite restriction of building height to a maximum of eight or ten stories. At the other extreme is a school of protagonists who are enthusiastic and even lyrical in their praise of the skyscraper, who see in it both a necessary result of American conditions and a characteristic product of American genius, and who protest against any attempt to restrict or regulate its development. Ranging between these two extremes are individual thinkers who are willing to see both sides of the question, who appraise pros and cons on the basis of their individual experience or such facts as happen to be available to them, and who favor moderate programmes of restriction or regulation based on their individual appraisals of merits and defects.

"While in the public mind to-day the strongest count in the indictment of the skyscraper is probably its alleged influence in increasing traffic and population congestion, there is another argument which demands prior consideration for reasons to be discussed later. This is the contention that the tall building is an economic fallacy—that even from the private owner's point of view it does not *pay* and therefore should not be permitted. If this one point could be proved, the whole battle against the skyscraper would be won. Obviously, if it can be conclusively demonstrated that tall buildings as a class are unprofitable or less profitable than low buildings, investors will cease to erect such structures and legislators will not hesitate to discourage them."

Assuming that the land value is

\$200 per square foot, the investigation showed that a building of 63 stories in height reaches the point of maximum economic returns. From a detailed investigation of an 8-story building costing \$22,193,000 to build, the net return was found to be but 4.22 per cent. In other words, the higher land value makes such a low building unprofitable. The return on a 63-story building was found to be 10.25 per cent. Where the land value is \$400 a square foot, a building of 75 stories in height was found to be most economical. These conclusions were reached upon the supposition that the construction of the building would be restricted by the zoning laws of New York City applying to mid-city sections.

"This maximum *economic* height is of course much below what might be called the maximum *physical* or *engineering* height. For all practical purposes, this physical or engineering limitation upon possible building heights has been removed by the flexibility of structural steel, terracotta, and other modern building materials and by the astounding developments in elevator and foundation engineering. Competent students of the problem estimate that if it were not for economic factors, it would be possible to erect, and operate successfully, an office-building approximating two thousand feet in height. The adequate elevator servicing of such a structure would require an elevator speed beyond the present legal limits as well as new safety devices and ingenious traffic arrangements (such, for instance, as double-deck cabs and new combinations of express and local cars) which have not yet been subjected to the test of actual public trial but which, on the basis of prolonged experiment, the foremost elevator engineers believe to be entirely practicable. The two limiting factors which make it impracticable to go beyond the approximate height of



2,000 feet are (1) the enormous weight of the elevator cables required, and (2) the capacity of the average human eardrum to withstand the vibration in an elevator-cab travelling at a speed exceeding approximately 1,500 feet per minute."

A study of the economic possibilities requires the careful consideration of various factors which enter into the physical construction, the rental outlook, and the restriction laws surrounding skyscrapers. Among the important factors noted in the investigation were the following:

1. Value of the land.
2. Size and shape of plot.
3. Legal restrictions.

4. Efficiency of architectural design and layout.
5. Building factors showing tendency to increase in cost as height is increased.
 - (1) Structural steel.
 - (2) Elevators.
 - (3) Brickwork.
 - (4) Plumbing and water supply.
 - (5) Heating and ventilating.
 - (6) Electric light and power wiring.
 - (7) Total mechanical equipment.
 - (8) Permanent interior partitions.
 - (9) Windows and glazing.
6. Building factors showing tendency to decrease in cost as height is increased.
 - (1) Roofing.

- (2) Excavations and foundations.
- (3) Miscellaneous.
7. Building factors showing tendency to constant cost at all heights:
 - (1) Interior finish.
 - (2) Concrete floors.
 - (3) Exterior finish.
8. Absorption of rentable area by elevators and other service facilities.
9. Level of construction costs.
10. Variations in rental value of floors at various heights.
11. Variations in operating costs at various heights.

The full report of the investigation is to be published shortly by the American Institute of Steel Construction in book form.



WATER PENETRATION THROUGH WALLS OF SKELETON CONSTRUCTION

JAMES E. MEEK, former Associate Architect and Chief of the Specification Division, New York City's Board of Education, now a consulting architect, makes public the results of some of his observations on water penetration. His findings are grouped under the following divisions of the subject: 1. Conditions above the Roof Surface; 2. Enclosure Wall Construction; 3. Lintel and Sill Conditions; 4. Materials and Methods.

After detailed analysis of the vulnerable points of attack for the elements, Mr. Meek says:

"The construction having the greatest factor of safety against water penetration is the solid 12-inch brick wall, furred with terra-cotta blocks. This type of wall has staggered or broken vertical joints, and on account of the thin and level horizontal courses all joints are more readily filled with mortar, even by a careless workman. This type of construction weighs a little more and costs a little more than the back-up tile wall; it is, however, now being more generally used in structures where the danger of water penetration is fully recognized.

"The following is an analysis of the difference in cost and weight between back-up tile walls and solid brick walls. These prices are approximate only and are based on normal construction with no allowance

made for extra supervision in laying back-up tile or for spandrel beam flashing.

Weight of 12-in. back-up tile wall, 90 lb. sq. ft.
Weight of 12-in. solid brick wall, 120 lb. sq. ft.

	Sq. ft.	Sq. ft.
12-in. solid brick wall. . . .	\$1.22½	
4-in. terra-cotta furring. . .	.23	
		\$1.45½
12-in. back-up tile wall. . .	\$1.09½	
4-in. terra-cotta furring. . .	.23	
		\$1.32½
2-coat mastic.06	

"Difference in cost between solid brick wall furred and back-up tile unfurred on \$1,000,000 school building, \$10,000.

"Cost of exterior waterproofing, \$8,000-\$10,000.

"As an additional factor of safety for back-up tile walls, the author has to suggest an 8-inch brick facing instead of the customary 4-inch facing with a corresponding reduction in the thickness of the back-up tile. This suggestion has met with favorable comment and is offered for further consideration."

There is much more to Mr. Meek's observations, but unfortunately we cannot print these in full for lack of space.

WHEN IS A BUILDING "UNDER CONSTRUCTION"?

A QUESTION of "When is a building under construction, legally?" came up recently in the Supreme Court of New York. Henry E. Blum, architect, had brought a

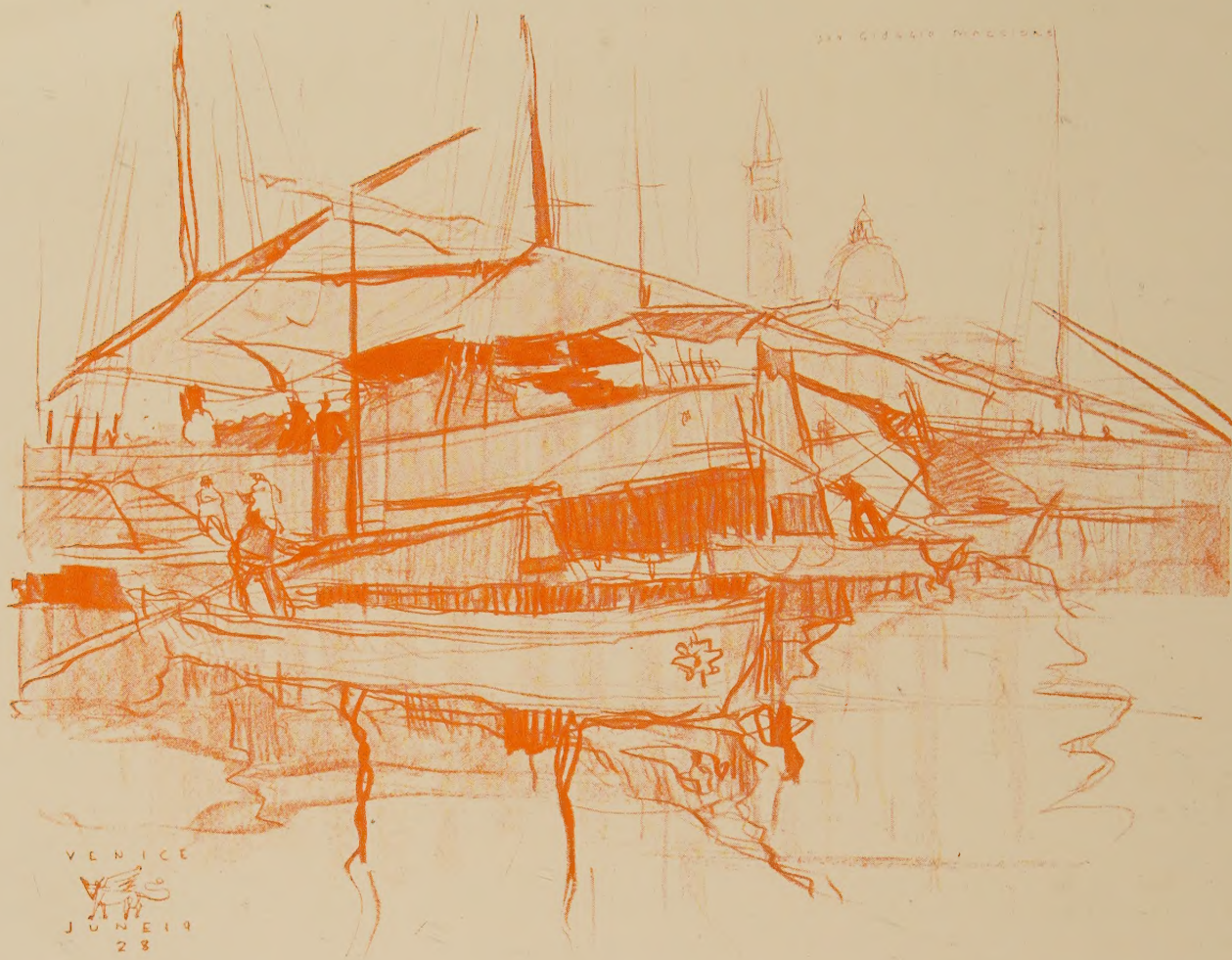
mandamus proceeding to compel the tenement-house commissioner to approve a plan for an apartment-house. Blum's contention was that, the excavation work completed, and the foundations laid, the building was under construction. The corporation counsel, on the other hand, contended that a building is not under construction until the second tier of brick is in place.

THE BUILDING DOLLAR

A STUDY recently completed by the Bureau of Labor Statistics, Department of Labor, in Washington, D. C., Cincinnati and Decatur, Ill., covered relative material and labor costs for construction.

Building material, amounted to 58.2 per cent, while labor represented the balance. The actual percentage for residential buildings was 54 and for non-residential buildings 61.7 per cent. These figures are net cost from the time excavation was started and do not include overhead expenses or profit, cost of lands or finance charges.

Carpenter work, including both material and labor costs, averaged 32.7 cents of the residential building dollar, while brick work accounted for 16.1 cents; concrete work, 9.5 cents; plumbing, 9.3 cents; plastering and lathing, 8.6 cents; heating, 5.5 cents; painting, 4.4; electrical wiring and fixtures, 2.8 cents; tile work, 2.1 cents; excavating and grading, 2 cents; and miscellaneous, 7 cents.



VENICE

*From the drawing (12 x 16 inches) in sanguine
by ERNEST BORN*

[ARCHITECTURE]
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